

The copyright © of this thesis belongs to its rightful author and/or other copyright owner. Copies can be accessed and downloaded for non-commercial or learning purposes without any charge and permission. The thesis cannot be reproduced or quoted as a whole without the permission from its rightful owner. No alteration or changes in format is allowed without permission from its rightful owner.



**GREEN HUMAN RESOURCE MANAGEMENT (GHRM) PRACTICES AND  
ORGANIZATIONAL CITIZENSHIP BEHAVIOUR FOR ENVIRONMENT  
(OCBE): A CASE OF FERTILIZER COMPANY IN KEDAH**



**MOHD FAIZAL BIN MOHD ROFI**

Thesis submitted to  
School of Business Management,  
Universiti Utara Malaysia,  
in Partial Fulfilment of the Requirement for the Master of Science (Management)



**Pusat Pengajian Pengurusan  
Perniagaan**

SCHOOL OF BUSINESS MANAGEMENT

**Universiti Utara Malaysia**

**PERAKUAN KERJA KERTAS PENYELIDIKAN**  
(Certification of Research Paper)

Saya, mengaku bertandatangan, memperakukan bahawa  
(I, the undersigned, certified that)

**MOHD FAIZAL BIN MOHD ROFI (820354)**

Calon untuk Ijazah Sarjana  
(Candidate for the degree of)

**MASTER OF SCIENCE (MANAGEMENT)**

telah mengemukakan kertas penyelidikan yang bertajuk  
(has presented his/her research paper of the following title)


**GREEN HUMAN RESOURCES MANAGEMENT (GHRM) PRACTICES AND  
ORGANIZATIONAL CITIZENSHIP BEHAVIOR FOR ENVIRONMENT  
(OCBE): A CASE OF FERTILIZER COMPANY IN KEDAH**

Seperti yang tercatat di muka surat tajuk dan kulit kertas penyelidikan  
(as it appears on the title page and front cover of the research paper)

Bahawa kertas penyelidikan tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu  
dengan memuaskan.

(that the research paper acceptable in the form and content and that a satisfactory knowledge of the field is covered  
by the research paper).

Nama Penyelia : **DR. SITI NORASYIKIN BT. ABDUL HAMID**  
(Name of Supervisor)

Tandatangan :   
(Signature)

Tarikh : **18 DISEMBER 2019**  
(Date)

## **PERMISSION TO USE**

In presenting this dissertation in partial fulfilment of the requirement for a Post Graduate degree from the Universiti Utara Malaysia (UUM), I agree that the Library of this university may make it freely available for inspection. I further agree that permission for copying this project paper in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor or in their absence, by the Dean of School of Business Management where I did my project paper. It is understood that any copying or publication or use of this project paper part of it for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the UUM in any scholarly use which may be made of any material in my dissertation. Request for permission to copy or to make other use of materials in this project paper in whole or in part should be addressed to:

Dean of School of Business Management

Universiti Utara Malaysia

06010 UUM Sintok

Kedah Darul Aman

## ABSTRACT

Environmental issues created by industries are a concern to local communities, governments and related agencies. It will raise serious concerns about the environment and the level of operation of the industry. This situation calls for the contribution of business organizations as employees to address environmental issues. This study examined factors that are the correlate with organizational citizenship behaviour environment (OCBE) at industries organizations in Malaysia. The purpose of this research is to examine the correlation between Green Human Resources Management (GHRM) practices and Organizational Citizenship Behavior for Environmental (OCBE) at NPK Fertilizer Company. OCBE among employees can contribute to environmental management of organization. The role of green HRM practice is a one of organization strategy in shaping OCBE among employee. This study assessed the correlation between seven dimension of GHRM practices, namely green job analysis and design, green recruitment and selection, green training and development, green performance management, green compensation management, green health and safety and green labor relation and involvement with OCBE. The research was conducted in fertilizer company in Kedah and 145 respondents have participated in this survey. This research used survey methodology by questionnaire, then analysed by descriptive analysis, factor analysis, reliability test and correlation analysis using statistical package for social sciences (SPSS). Findings showed that green job analysis and design having the moderate significant positive relationship with OCBE. The study also found that other six dimension of GHRM which green recruitment and selection, green training and development, green performance management, green compensation management, green health and safety and green labor relation and involvement have a low significant positive relationship with OCBE. Finally, discussion and conclusion on the implication for this research were presented.

**Keywords:** Organizational Citizenship Behavior for Environmental (OCBE), Green Human Resources Management (GHRM) practices.

## ABSTRAK

Isu persekitaran yang dihasilkan oleh industri menjadi kebimbangan masyarakat setempat, kerajaan dan agensi yang berkaitan. Ia akan menimbulkan kebimbangan serius mengenai persekitaran dan tahap operasi industri. Keadaan ini memerlukan inisiatif organisasi industri khususnya pekerja untuk menangani isu alam sekitar. Kajian ini mengkaji faktor-faktor yang berkaitan dengan persekitaran tingkah laku kewarganegaraan organisasi (OCBE) di organisasi industri di Malaysia. Tujuan kajian ini adalah untuk mengkaji korelasi antara amalan hijau Pengurusan Sumber Manusia (GHRM) dan Perilaku Kewarganegaraan Organisasi untuk Alam Sekitar (OCBE) di Syarikat pembuatan. Perilaku Kewarganegaraan Organisasi untuk Alam Sekitar di kalangan pekerja boleh menyumbang kepada pengurusan alam sekitar di organisasi. Peranan amalan hijau Pengurusan Sumber Manusia adalah salah satu strategi organisasi dalam membentuk perilaku kewarganegaraan organisasi untuk alam sekitar di kalangan pekerja. Kajian ini menilai korelasi di antara tujuh dimensi amalan GHRM iaitu analisis kerja dan reka bentuk hijau, pengambilan dan pemilihan hijau, latihan dan pembangunan hijau, pengurusan prestasi hijau, pengurusan pampasan hijau, kesihatan dan keselamatan hijau serta hubungan buruh dan penglibatan hijau terhadap OCBE. Penyelidikan ini dijalankan di syarikat pembuatan baja di Kedah dan 145 responden telah mengambil bahagian dalam tinjauan ini. Kajian ini menggunakan metodologi tinjauan dengan soal selidik, kemudiannya dianalisis dengan analisis deskriptif, analisis faktor, ujian reliabiliti dan analisis korelasi menggunakan pakej statistik untuk sains sosial (SPSS). Dapatan menunjukkan bahawa analisis kerja dan reka bentuk hijau mempunyai hubungan positif positif yang sederhana dengan OCBE. Kajian itu juga mendapati bahawa enam dimensi GHRM iaitu pengambilan dan pemilihan hijau, latihan dan pembangunan hijau, pengurusan prestasi hijau, pengurusan pampasan hijau, kesihatan dan keselamatan hijau serta hubungan dan penglibatan buruh hijau mempunyai hubungan positif yang rendah dengan OCBE. Akhirnya, perbincangan dan kesimpulan mengenai implikasi untuk kajian ini turut dibentangkan.

Katakunci: Perilaku Kewarganegaraan Organisasi untuk Alam Sekitar, Amalan Hijau Pengurusan Sumber Manusia

## ACKNOWLEDGEMENT

In the Name of Allah, the Most Forgiving, Most Merciful. All praise and gratitude be given to Allah, Lord of the Lords, for giving me blessing to complete this study.

My deepest appreciation goes to Dr. Siti Norasyikin bt. Abdul Hamid who has provided an unlimited amount of encouragement and professional support toward the completion of my project paper. May Allah bless you and your family.

An honest gratitude for my family and special thanks to my wife, Mahani bt Salman for support and motivation to finish this study. For my dearest children, I hope this effort will serve as an example and motivation for continued success in life and education.

A lot of thanks to my friends and other lecturers in University Utara Malaysia (UUM) for always has been very supportive on my study. Without the constant attention, care, encouragement and sacrifice, it was difficult for me to complete this study.

Thank you.

## TABLE OF CONTENT

CERTIFICATION .....	ii
PERMISSION TO USE .....	iii
ABSTRACT .....	iv
ABSTRAK .....	v
ACKNOWLEDGEMENT .....	vi
LIST OF TABLE .....	xii
LIST OF FIGURES .....	xiii
LIST OF ABBREVIATIONS .....	xiv
CHAPTER ONE : INTRODUCTION .....	1
1.1 Introduction .....	1
1.2 Background of The Study .....	1
1.3 Problem Statement .....	5
1.4 Research Questions .....	9
1.5 Research Objectives .....	9
1.6 Significance of the study .....	10
1.7 Scope of The Study .....	11
1.8 Definition of Key Terms .....	12
1.9 Organization of the Chapter .....	14
CHAPTER TWO : LITERATURE REVIEW .....	15
2.1 Introduction .....	15



2.2	Definition and concept of OCBE .....	15
2.3	Definition and concept of GHRM Practices .....	18
2.3.1	Definition and concept of Green Job Analysis and Design .....	20
2.3.2	Definition and concept of Green Recruitment and Selection .....	22
2.3.3	Definition and concept of Green Training and Development.....	24
2.3.4	Definition and concept of Green Performance Management .....	26
2.3.5	Definition and concept of Green Compensation Management.....	27
2.3.6	Definition and concept of Green Health and Safety .....	28
2.3.7	Definition and concept of Green Labor Relations and Involvement .....	30
2.4	The Relationship between Variables.....	32
2.4.1	Green Job Analysis and Design with OCBE .....	32
2.4.2	Green Recruitment and Selection with OCBE.....	34
2.4.3	Green Training and Development with OCBE.....	35
2.4.4	Green Performance Management with OCBE.....	36
2.4.5	Green Compensation Management and OCBE .....	38
2.4.6	Green Health and Safety with OCBE .....	39
2.4.7	Green Labour Relations and Involvement with OCBE .....	41
2.5	Related theories on the Variables.....	42
2.6	Chapter Conclusion .....	44
CHAPTER THREE : RESEARCH METHODOLOGY .....		45
3.1	Introduction .....	45

3.2	Research Framework and Hypothesis .....	45
3.3	Research Design .....	47
3.4	Population, Sample and Sampling Method .....	48
3.4.1	Population .....	49
3.4.2	Sampling Size .....	49
3.4.3	Sampling Technique .....	50
3.4	Measurement and Questionnaire Design .....	50
3.4.1	Organizational Citizenship Behaviour for Environment (OCBE) .....	51
3.4.2	Green Job analysis and Design .....	52
3.4.3	Green Recruitment and Selection .....	52
3.4.4	Green Training and Development .....	53
3.4.5	Green Performance Management .....	54
3.4.6	Green Compensation Management .....	55
3.4.7	Green Health and Safety .....	56
3.4.8	Green Labour Relations and Involvement .....	56
3.5	Data Collection .....	57
3.6	Data Analysis .....	58
3.6.1	Descriptive Analysis .....	58
3.6.2	Factor Analysis .....	58
3.6.3	Reliability Analysis .....	59
3.6.4	Correlation Analysis .....	59

3.7	Pilot Testing .....	59
3.9	Chapter Conclusion .....	61
CHAPTER FOUR : DATA ANALYSIS AND FINDINGS .....		62
4.1	Introduction .....	62
4.2	Responses Rate.....	62
4.3	Respondent's Demographic Profile .....	63
4.4	Factor Analysis.....	65
4.5	Reliability Analysis .....	69
4.6	Pearson Correlation Analysis .....	70
4.6.1	Green job analysis and design with OCBE.....	72
4.6.2	Green Recruitment and Selection with OCBE.....	72
4.6.3	Green training and development with OCBE .....	72
4.6.4	Green performance management with OCBE .....	73
4.6.5	Green compensation management with OCBE .....	73
4.6.6	Green health and safety with OCBE.....	74
4.6.7	Green labour relations and involvement with OCBE .....	74
4.7	Hypothesis Testing.....	75
4.8	Chapter Conclusion .....	76
CHAPTER FIVE : DISCUSSION AND CONCLUSION .....		77
5.1	Introduction .....	77
5.2	Discussion .....	77

5.2.1	The Relationship between GJD and OCBE .....	77
5.2.2	The Relationship between GRS with OCBE .....	78
5.2.3	The Relationship between GTD with OCBE .....	79
5.2.4	The Relationship between GPM with OCBE .....	80
5.2.5	The Relationship between GCM with OCBE .....	80
5.2.6	The Relationship between GHS with OCBE .....	81
5.2.7	The Relationship between GLR with OCBE .....	82
5.3	Recommendations .....	83
5.4	Suggestions for Future Research .....	83
5.5	Theoretical and Practical Implications .....	84
5.6	Conclusions .....	85
REFERENCES .....		86
APPENDICES .....		100
APPENDIX A: QUESTIONNAIRE .....		100
APPENDIX B : Respondents Demographic Analysis .....		107
APPENDIX C : Factor Analysis .....		110
APPENDIX D : Realibility Analysis .....		113
APPENDIX E : Correlation Analysis .....		115

## LIST OF TABLE

Table 3.1 Operational Definitions and items for OCBE.....	51
Table 3. 2 Operational Definitions and items for GJD .....	52
Table 3. 3 Operational Definitions and items for GRS.....	53
Table 3. 4 Operational Definitions and items for GTD .....	54
Table 3. 5 Operational Definitions and items for GPM.....	54
Table 3. 6 Operational Definitions and items for GCM .....	55
Table 3. 7 Operational Definitions and items for GHS .....	56
Table 3. 8 Operational Definitions and items for GLR .....	57
Table 3. 9 Reliability test for pilot Test .....	60
Table 4. 1 Total Number of Questionnaire .....	63
Table 4. 2 Respondents demographic .....	65
Table 4. 3 Factor analysis .....	67
Table 4. 4 Summary of Exploratory factor analysis .....	68
Table 4. 5 Reliability Coefficient results .....	70
Table 4. 6 Rules of thumb correlation coefficient .....	71
Table 4. 7 Result of correlation.....	71
Table 4. 8 Hypotheses summary .....	75

## LIST OF FIGURES

Figure 3.1 : Research Framework .....	46
---------------------------------------	----



## **LIST OF ABBREVIATIONS**

OCBE	-	Organizational Citizenship Behavior for Environment
OCB	-	Organizational Citizenship Behavior
GHRM	-	Green Human Resources Management
HRM	-	Human Resources Management
HR	-	Human Resources
DOE	-	Department of Environment
EM	-	Environmental Management



## **CHAPTER ONE : INTRODUCTION**

### **1.1 Introduction**

Individual employee's organizational citizenship behavior for environment(OCBE) within an organisation can have a significant impact on the overall outcomes of their organisation's environmental management. There are many factor contribute to individual OCBE among employees and one of significant factor is green human resources management(GHRM) practices. A lot of dimension of GHRM practice were develop and Shah (2019) already construct seven dimension of GHRM practices which is can use to examine correlation between GHRM and OCBE.

### **1.2 Background of The Study**

Environmental issues are increasingly being challenged and efforts to address them require the cooperation and commitment of all parties. Various environmental issues now concern the society as a whole, such as air pollution, noise pollution, sea pollution, water pollution, odor pollution, river pollution, and more (Mustakim et al, 2019). While globalization continues and the natural processes of the planet turn local problems into international issues, environmental protection is a concern for many countries around the world.

In the Asian world environment, there is an increase in the strength of green emergencies as a result of growing community influence in the company, the cost of movement that complies with environmental regulations, and changing consumer



attitudes (Kuchinka et al,2018). Due to the rapid development of the manufacturing sector, Malaysia is not excluded from environmental pollution. The manufacturing sector also plays a key role in supporting and encouraging this protection by creating sustainable goods that are environmentally friendly.

Air quality, quality of river water, deforestation, household waste and toxic waste are some examples of the country's environmental problems. Tan & Salleh (2017) reported that noise, air, water, soil, radioactive and odor are the forms of pollution in the manufacturing industry. That research was actually carried out in line with Rinkesh (2016) on noise pollution, Azid et al. (2015) on air pollution, Kumar and Lee (2012) on water pollution, Nowak et al. (2013) on soil pollution and Achim et al. (2012) on radioactive contamination. Latest, Chemical contaminations in Sg. Kim-Kim, Pasir Gudang are water pollution incidents arising from industrial waste generated by the industry (Zakaria, 14 march 2019). The illegal dumping produced toxic smoke, affecting 6,000 people and 2,775 receiving treatment. The Johor state government has allocated RM 6.4 million for the 1.5-kilometer radius for clean-up process.

The manufacturing sector is a major driver of economic growth in the country, but it also contributes to the country's pollution. It is projected that the manufacturing sector will expand by 5.1 percent per year, contributing 22.1 percent to GDP by 2020 (Economic Planning Unit, 2015). Overall, 2.5 million workers are projected from the industry, representing 18 percent of total employment in 2015. It is projected that the manufacturing sector will expand at 5.1 percent per year, contributing 22.1 percent to GDP and 18.2 percent of total jobs by 2020 (Jun, 2016). As operations in the manufacturing sector compete to maximize their profits, they also need to give due

consideration to the cost of waste treatment in the production process. These considerations will affect their behavior in compliance with or contrary to the rules.

In Malaysia, the Environment Quality Act (EQA) 1974 is seen as adequate and sufficiently comprehensive to control industry behaviour. Environmental issues become increasingly challenging and this situation caused an increase in the number of environmental issues which are subject to the Environmental Quality Act 1974 at the same time contributing to the increase in environmental cases across Malaysia. Zulkifli and Hazrina (2015) stated that the number of points sources subjected to EQA 1974 was increased from 29,316 in 2007 to 62,259 in 2015.

According to the Department of Environment (DOE) state of Kedah, the total number of sources of pollution identified should be 3233 for 2019 where industry compliance rates dropped 68 percent from 82 percent for effluent compliance, 78 percent to 72 percent for air compliance and scheduled waste disposal by 68 percent from 85 percent last year (DOE Kedah, 2019). As of July 2019, a total of 463 directives, 37 compounds, 45 detention operations, one prohibition order and two investigative papers have been released so far by the DOE state of Kedah (Amran, 9 July 2019). The increase in the number of complaints cases related to environmental issues and reduction number of enforcement officers also further complicate this situation.

In addition, Director General of the Department of Environment, Datuk Dr. Ahmad Kamarulnajib concludes that the industry's level of compliance with environmental laws, regulations and standards is still lacking and relies solely on the scrutiny of nature department officials (Borneo Post, 2016). Therefore, the

Department of Environment has taken the approach through laws and regulations that lead to self-regulation as practiced by developed countries. According to a study by the Department of Environment, it is found that industry adherence to the elements of self-regulation is good for every aspect of environmental control. Environmental activities and management in an industry run by a competent person can avoid legal risk by the Department of Environment.

Reducing pollution and environmental protection not only the responsibility of the government but also industry and individuals can help reduce pollution problems. On the basis of their annual reports in Malaysia (Yusmani & Yusliza, 2015), the government has discussed environmental issues and private companies are required to provide information on the environmental impact of their economic activities.

It is important for individual employees behaviour to be responsible for the environmental management of the organization. Focus should also be given to employees behaviour to help stabilize and protect the environment. The need for organizations to provide guidelines that can lead to the emergence of attitudes as well as green behavior among employees is very important (Razab & Udin, 2016). Employees need to be informed by organizations as well as individuals to encourage work environmentally responsible work, while at the same time giving the organization a good name as everyone begins to look at companies and products that are going green.

Having responsible employees who are educated and willing towards environment protection could help organisation to maintain or manage environmental issues. Individual employee behaviour towards effective environmental management and their willingness to taking care and follow the rules may help organisation get are

good environmental management. This individual behaviour towards environment which known as OCBE could foster good environmental management.

Thus study on individual behaviour specifically OCBE could benefit to organisation. All organizations need to promote GHRM practices to individual employee OCBE if they are to become a sustaining organization which focused on improving the health of the natural environment and meeting the needs of stakeholders while at the same time meeting organizational objectives.

As conclusion, these studies focus on OCBE among individual employee in manufacturing company. Organizations through HRM should be a catalyst for employee behaviour towards green management aspirations and a guide for workers to set up high OCBE. Therefore, HRM in term of green HRM emerges as a key management field that has a major impact on organizational issues. The purpose of this study was to study the relationship in manufacturing organizations between green HRM practices against OCBE.

### **1.3 Problem Statement**

Taking care environmental is important not only to organisation or company but for future generation. Government already setup policy and enforcement however it still has environmental issues reported. In this regard, the individual employees' awareness, willingness and positive behaviour in environmental protection which refer to OCBE is important in organisation.

OCBEs may be intended for work carried out by employees on a personal initiative, against different people within the organization through a mutual support structure between employees and organizations in the form of perseverance support within the organization (Boiral & Paillé, 2012). Therefore, the OCBE demonstrates an individual's willingness to participate in the organization by engaging in behaviors outside of job description that contribute to the natural environment.

According to Shah (2019), organisation management through green HRM may help company to promote environmental behaviour among individual employees. The term 'green human resources' is commonly used as a guide to enhancing human resources policies and practices for natural resource preservation and protection (Prasad, 2013).

Nagendra & Kansal (2014) interpret green HRM as an ecological condition of fiscal policy, external policy and industrial policy that will foster eco-friendly movement by creating a cleaner environment, reducing paper use, greater retention rates and appropriate waste disposal. In addition, Yusmani et. al (2015) reviews the strategic green HRM concept of CSR activities, work-life balance and GHRM that enhances the sustainability of all stakeholders. This requires thinking of economic, social and environmental aspects.

However, it must be distinguished that the conventional HRM subsystem is different from the green HRM subsystem because green HRM has unique properties as it focuses on environmental management (Fayyazia et al., 2015). Therefore, management effort in company through green HRM may influence employees OCBE and operational will become smooth and profit will generate.

Up until this point, Pham (2019) has collected papers in several different GHRM and OCBE sections. There are hypothetical tests aimed at understanding the current concepts and models of GHRM (Shah, 2019; Siyambalapitaya et al, 2018; Tang et al, 2017) such as observations to explore relationship GHRM with OCBE for the manufacturing industry (Silvester, 2019), the hotel industry (Luu , 2019), the healthcare industry (Pinzone, 2016) and administrative employees (Niyomdechcha & Yahya, 2019). There are also studies that make OCBE a mediator variable for the impact of GHRM on sustainable performance in Jordan (Alnajdawi, 2017) and also GHRM relationship studies on environmental performance in Malaysia (Yusmani, 2018).

The articles circulated around there to date, however, have left the associated gaps in the study. Initially, following the theory of social exchange (Emerson, 1976), if employees see help and rewards from green activities, they are likely to be interested in green exercises deliberately (Alt and Spitzeck, 2016; Paille and Mejia-Morelos, 2014). Similarly, despite the fact that Ren et al. (2017) argues that green human resource management procedures that convince the behavior of the worker towards the environment, and so far not many researchers have been thinking about this edge. For example, Pinzone et al (2016) explore the impacts of GHRM rehearses on OCBE, with regards to the healthcare framework in England.

Secondly, in view of the Ability-Motivation-Opportunity hypothesis, Kim et al (2015) address the use of a multiplicative model (three-way intuitive impact) that essentially describes the contributions of human resource management practices to the benefits of organizational implementation.

According to Shah (2019), GHRM is a multidimensional construction consisting of seven dimensions, specifically green job design, green recruitment and selection, green training and development, green performance management, green compensation management, green health and safety, green labour relations and involvement which can be estimated by 28 items.

Pham et al.(2019) conducted a systematic literature review from different past studies on GHRM have identified and recommended five of the seven measurements to be specific green recruitment and selection, green training and development, green performance management, green compensation management and green labor relations and involvement. A few investigations by previous researchers already summarized in study (Pham et al, 2019) clarified the key segments of GHRM and stressed the improvement of GHRM scale. Meanwhile, the two items namely green job design and green health and safety have no additional references and proper documented in research to the knowledge of the researcher.

This situation created a void in single study to be carried out using seven GHRM dimension against OCBE. The reason for this study is to research in the manufacturing organization using new valid measurement for GHRM the link between green HRM practices against OCBE. Therefore, it is beneficial to investigate the influent of seven dimensions of GHRM on OCBE in order to have good environmental management among individual employee in manufacturing company.

## **1.4 Research Questions**

This study is conducted to examine whether the independent variables, that is Green Human Resource Management (GHRM) practices which include covers green job analysis and design, green recruitment and selection, green training and development, green performance management, green compensation management, green health and safety, green labour relations and involvement have a correlation to Organizational Citizenship Behaviors for Environment (OCBE) in manufacturing firms as the dependent variable. This research will therefore attempt to answers to the following questions:

1. Does green job design correlate with OCBE?
2. Does green recruitment and selection correlate with OCBE?
3. Does green training and development correlate with OCBE?
4. Does green performance management correlate with OCBE?
5. Does green compensation management correlate with OCBE?
6. Does green health and safety correlate with OCBE?
7. Does green labour relations and involvement correlate with OCBE?

## **1.5 Research Objectives**

This research was aimed at analyzing the correlation between Green Human Resource Management (GHRM) and Organizational Citizenship Behaviors for Environment (OCBE) within the manufacturing sector. The aims of the study for this reason are as follows:



1. To determine the correlation between green job design with OCBE.
2. To examine the correlation between green recruitment and selection with OCBE.
3. To identify the correlation between green training and development with OCBE.
4. To examine the correlation between green performance management with OCBE.
5. To identify the correlation between green compensation management with OCBE.
6. To determine the correlation between green health and safety with OCBE.
7. To examine the correlation between green labour relations and involvement with OCBE.

#### **1.6 Significance of the study**

The study intends to understand the correlation between green human resources management practices at organisation with organizational citizenship behaviour for environment among employees in the organisation. Compared to previous studies in this area, the aim of this work is to improve existing literature by solving a few theoretical issues.

From the findings, it helps organisation or company to identify the significance factor that correlate with employee behaviour in environment issues and provide useful recommendation for organisation and other companies to reduce environmental issues and more sustainable to operational.

Moreover, this study also contributes to the academic's field through identify the most influence correlation between Green Job Design, Green Recruitment and Selection, Green Training and Development, Green Performance Management, Green Compensation Management, Green Health and Safety, Green Labor Relations and involvement and Organizational Citizenship Behaviors for Environment among organization and expand their future research.

### **1.7 Scope of The Study**

Scope of research focuses on Green Human Resource Management (GHRM) activities including Green Job Design Green Recruitment and Selection, Green Training and Development, Green Performance Management, Green Compensation Management, Green Health and Safety, Green Labor Relations and Involvement, with the company's Organizational Citizenship Environmental Behaviors (OCBE). Method uses through a questionnaire form and get feedback for data collection. This research covered on employees from managerial level to lowest level at NPK fertilizer company. The territory was located at Gurun, Kedah. The data for this study was collected within three weeks.

## **1.8 Definition of Key Terms**

### **1.8.1 Organizational Citizenship Behaviour for Environment (OCBE)**

OCBE refers to individual and voluntary social behaviors not expressly acknowledged by the formal reward system and leading to organizations more effective management of the environment (Boiral and Paille, 2012).

### **1.8.2 Green Job Analysis and Design**

Green job design refers to the process of combining different elements to create a job, taking into account the needs of organizational and individual employees taking environmental issues into consideration (Shah,2019).

### **1.8.3 Green Recruitment and Selection**

Organization goal is to select candidates who are dedicated and environmentally sensitive and willing to contribute by internal or external recruitment (Shah,2019).

### **1.8.4 Green Training and Development**

Organization develops a program of environmental-related training activities to develop the understanding and expertise of workers of environmental management in the workplace (Shah,2019).

### **1.8.5 Green Performance Management**

With an environmental management plan, the company will analyze the environmental effects of workers throughout the operating process to determine their commitment to organizational objectives (Shah,2019).

### **1.8.6 Green Compensation Management**

Financial and non-financial incentives for members of the organization whose conduct contributes to environmental management (Shah,2019).

### **1.8.7 Green Health and Safety**

Refer science of predicting, identifying, evaluating and mitigating occupational hazards that could endanger health and well-being while considering potential environmental factors (Shah,2019).

### **1.8.8 Green Labour Relations and Involvement**

Employees are given the opportunity to engage in environmental management. The broad types include participation, culture support, and tacit knowledge to stimulate member engagement with organization's environmental management (Shah,2019).

## **1.9 Organization of the Chapter**

This report consisted of 5 chapters. Chapter 1 presented the context of this study, discussion of problem statement, research issue, study objectives, study meaning and scope, and interpretation of key terms. The next chapter (chapter 2) outlined reviews of literature on OCBE and GHRM subjects. Chapter 3 continues the research methodology, including the theoretical model, theories, research design, sampling and procedure of data collection, as well as the instrumentation used in this analysis. The following chapter 4 presents findings of analysis and hypotheses testing of the result. Finally, chapter 5 discussion, conclusion and summarizes the whole study, then followed by recommendation and an insight into future research.



## **CHAPTER TWO : LITERATURE REVIEW**

### **2.1 Introduction**

This chapter presents the literature review related to the topic of concern for manufacturing industries and their environmental issues. It is useful to review the related areas of the current studies to understand the perspective of environmental issues used in this study, Organizational Citizenship Behaviors for Environment and its relationship as well as Green Human Resource Management practices measured to anticipated study outcomes.

### **2.2 Definition and concept of Organizational Citizenship Behaviour for Environment (OCBE)**

OCBE has been defined as those voluntary actions by employees within an organisation that are directed toward environmental improvement (Daily, et al., 2009). Boiral and Paillé (2012) generalized the definition of OCBE by arguing that OCBE is voluntary and cannot be embraced directly by the formal incentive system, leading to an organization's more effective management of the environment.

The behavior of organizational citizenship towards the environment (OCBE), such as the generic definition of organizational citizenship behavior (OCB), can be focused on a number of activities in which levels of knowledge can have different effects. According to Ramus and Killmer (2007), discretionary eco-initiatives can be

viewed as a form of pro-social behavior as they contribute to social welfare and value growth.

This interpretation of OCBE is in line with Organ (1997) concept of OCB, which stresses that OCB workers go beyond what formal job description implies and contribute to the conservation and creation of the context in which their work takes place. OCBE provides a situation in which this conduct demonstrates a willingness and ability to participate in environmentally friendly behaviour, without a specific appreciation guide that can also improve the organization's successful functioning (Boiral and Paillé's, 2012). While OCBE is derived from OCB, Lamm et al. (2013) noted that both constructs are described as distinct from each other. In other words, OCBE defines less common voluntary activities that directly benefit the environment, while OCB discusses behaviors that are more generally beneficial to the organization.

A theoretical framework has been proposed in the literature to explain the main drivers and consequences of OCBE. According to Ramus and Killmer (2007), voluntary eco-initiatives are driven by supervisory encouragement, social standards, personal predisposition, and self-efficacy. Daily et al. (2009) suggest a similar framework in which supervisory assistance, environmental concerns, interpreted as corporate social success and organizational participation, drive OCBEs. The analysis also highlighted that OCBE would boost environmental quality by promoting green initiatives that go beyond job descriptions based on the general OCB literature.

Building on the theory of environmental psychology, Lülfs and Hahn (2013) recently proposed a more complex model that distinguishes distal predictors (organizational context, awareness of needs, causal understanding and social norms)

and more common behavioral determinants (behavioral control, OCBE standards and attitudes) from the willingness of workers to voluntarily follow environment-friendly initiatives. According to this model, voluntary structures can be seen as mediators of intentions and actions based on voluntary pro-environmental acts.

Recent studies by introducing a scale for OCBE discussed some of the drawbacks of this theoretical model. Boiral and Paillé (2012) recommend a three-dimensional scale of measurement which are behavior and discretionary measures to improve environmental or quality practices (as known as eco-initiatives), voluntary involvement in corporate projects and activities (as known as eco-civic engagement) and volunteering to help organizations better integrate environmental concerns (as known as eco-assistance). Exploratory and verification experiments have confirmed this measurement scale.

Lamm et al. (2013) also propose a metric scale of OCBE based on very different eco-initiatives: bottles and recycled paper, dual printing, etc. While these programs focus on practical actions, they do not have various aspects of OCBE and may have abstract points that are relevant to the degree and nature of environmental issues. Eventually, additional measures were developed by Lamm et al. (2013) and Boiral and Paillé (2012) to capture various aspects of unique OCBE properties.

As conclusion, this study using a definition by Boiral and Paillé (2012) which is OCBE to individual and voluntary social behaviors not expressly acknowledged by the formal reward system and leading to organizations more effective management of the environment.



## **2.3 Definition and concept of Green Human Resources Management (GHRM) Practices**

Green HRM practices are defined as being related to put ordinary workers back in the green workers to achieve the environmental objectives of the organization and ultimately produce important inputs to environmental sustainability with aspects of HRM (Silvester et al,2019).Green Human Resource Management (GHRM) is characterized as environmental management (EM) related aspects of HRM and focuses on the role of human resources management (HRM) in the prevention of pollution through the operational processes of an organization (Pham et al, 2019).

GHRM activities include both traditional and organizationally related HRM practices and their strategic HRM aspects (Alnajdawi et al., 2017). The value of greening HRM practices has been acknowledged and many papers and articles have been written and discussed at the conference around the world. The implementation of GHRM in organizations has therefore begun to be regarded by scholars as a new research phenomenon in environmental management to coordinate HRM activities.

GHRM has become a key word in the context of environmental management. Since the 1990s, the number of green management studies has risen (Shah, 2019) and one research by Roome (1992) suggests that institutional strategies to tackle environmental issues and resource preservation hinder the ability to handle environmental issues. The introduction of the 14,000 International Standardization and the implementation of a green management system were the main reason for this increase (Nobari et al, 2018).

GHRM discloses the environmental management aspect of Human Resources (Renwick et. al, 2013). Opatha and Arulrajah (2014) have described GHRM as a process of designing, implementing and sustaining structures that make experienced employees. To achieve green goals and engage in environmental sustainability, it means turning the traditional workforce into the green workforce. GHRM is the method of using to utilize each employee interface in a way that promotes and manages realistic corporate training and awareness-raising (Rani and Mishra, 2014).

The GHRM model has followed a high engagement, high performance, and strategic HRM approach. Mishra et al. (2014) theorized that they are made up of an advanced HRM learning network that reflects the environmental safety focus of the organization. According to Boiral (2002), GHRM focuses on environmental risk and corporate behavior's environmental impact.

In addition, the present study sets the concept of GHRM based on the results of the study. GHRM is characterized as integrating green management elements into the job design, recruitment, training and development, motivation and maintenance functions of HRM to improve employees' environmentally friendly attitudes, meet employee expectations and achieve organizational objectives.

Shah (2019) develops a shared knowledge of GHRM by providing additional details on the basic construction structure. Previous studies on green HRM from different researchers and countries emphasized the integration of green components into HRM and strengthened the value of HRM in environmental management.

Shah (2019) has developed a new validation and instrument for the GHRM which consists of seven components, namely, green job design, green recruitment and selection, green training and development, green performance management, green compensation management, green health and safety and green labor relations and involvement, calculated by 28 items.

### **2.3.1 Definition and concept of Green Job Analysis and Design**

Job design can be defined by Armstrong (2003) as the creation of content, methods and job relationships to meet the employer's technical and organizational needs as well as social and personal needs. Job design is the role of organizing activities, tasks and responsibilities into job organization units, according to another concept (Ali and Aroosiya, 2012).

Chaneta (2011) describes job design as the creation of content, methods and job relationships to meet the needs of technology and organization as well as employers' social and personal needs. Task development will begin with the evaluation of job specifications, which is what needs to be done, and then take the following motivational features into account: independence, accountability, experience, and ultimately self-control (Armstrong, 2003).

Shah (2019) defined green job analysis and design refers to the process of combining various elements to form a job, taking into account the needs of organizational and individual employees considering environmental issues. There are different techniques for the design of jobs. The key strategies were job rotation, job extension, job enhancement, self-employment and high-performance job development

and such approaches include work turnover, engagement management and peer quality evaluation (Durai, 2010).

Dessler and Tan (2006) mentioned that job assessment is a systematic way of assessing working conditions and human needs. The job description and job definition are two of the actual results of the job assessment. Job descriptions are documents that describe roles and responsibilities as well as employment conditions. It can define many environmental management activities and obligations from the point of view of green management (Shah, 2019). Industries have included responsibility for the environment and the public and their ability to protect the atmosphere in every profession.

Many businesses have included at least one position in their job description for environmental management. In addition, job descriptions and role expectations need to include administrative, economic, and public roles, sustainable reporting, and obligations for health and safety. Therefore, Jabbour et al (2010) concluded that some businesses use cross teams to efficiently address business environment issues to avoid action that could be detrimental to the image and at the same time disadvantageous to the organization.

Dangelico (2015) suggests that both green prestige and green quality have been affected by green teamwork. A company's role of environmental protection includes multidisciplinary teamwork. To date, most businesses have developed roles related to the environment to illustrate the environmental management features of the business. Likewise, by combining green activities and roles, some companies are now preparing their work in a more environmentally friendly way.

As conclusion, this study using definition green job analysis and design as refers to the process of combining different elements to create a job, taking into account the needs of organizational and individual employees taking environmental issues into consideration.

### **2.3.2 Definition and concept of Green Recruitment and Selection**

Green Recruitment and selection (GRS) defined as preference of organization is to select candidates committed and sensitive to environmental issue and willing to contribution to this through internal or external recruitment (Shah, 2019). Dechant and Altman (1994) found that workers ' aspirations are important and they are interested in working in a company that will improve their value profile.

Improve the value of businesses by practical environmental assessments by companies (Bauer & Aiman-Smith, 1996). In fact, the candidate's purpose of working with a wider eco-friendly company is associated with higher job offer acceptance. Friedman (2003) believed that people would like to work for an environmentally friendly company and inspiration among incumbents working for larger firms for environmentally friendly firms (Brekke & Nyborg, 2008).

Therefore, once incumbents are given equal pay at different companies, they choose to shift towards a business that is socially responsible. Grolleau et al, (2012) acknowledged the green criterion of the workers. Strong commitment to maintaining the community strengthens its credibility. The environment conditions for recruiting a candidate, branding a green employer, and applying for environmental recognition are three GRS features recognized by Renwick et al. (2013).

Green awareness involves behavioral elements that allow organizations to achieve their green goals. Green governance is essentially improved as a result of their activities individuals establish pro-environmental knowledge (Del Brío et al., 2007). In terms of environmental protection, these entities are of interest to the company. To verify that job seekers have an environmental consciousness and are positive about green issues, most recruitment methods can be used (Milkovich & Boudreau, 2000). The branding of green employers is referred to by Ehnert et al. (2016) as the company and environmental management identity aspect which GHRM should create. Through identifying green employers, candidates may understand the importance of the business and their own values (Jones & Willness, 2013).

Jabbour (2011) claimed that it is possible to draw applicants to organizations with radical green indicators. Job applicants collect data on the sustainability opportunities of the business and are able to use their resources in the best environmental environment for organizations. Green workplace advertising is therefore a useful technique to draw constructive individual candidates on green issues. To assess and assign people, organisations must use the green criterion. Through job evaluation, recruiting firms should highlight environmental features. It is possible to ask questions about data, standards and green views.

As conclusion, this study using term green recruitment and selection as Organization goal is to select candidates who are dedicated and environmentally sensitive and willing to contribute by internal or external recruitment.

### **2.3.3 Definition and concept of Green Training and Development**

Definition of Green Training and Development (GTD) as organization implements a system of learning practices related to environmental issues in order to improve employees' aware and skills for environmental management in job (Shah, 2019). Del Brío et al. (2007) identified GTD as part of a management program of company awareness that helps employees follow sustainable practices. In addition, as part of corporate knowledge management programs, employees receive training to expand their understanding of environmental protection.

Furthermore, Employees develop skills in dealing with difficult environmental issues in organisation (Govindarajulu and Daily, 2004). Roy and Thérin (2008) believed it would improve the expertise of employees in gathering environmental data. The expression of environmental management practices is guided by safe environmental learning (Sarkis et al., 2010).

Green training and development (GTD) is an activity scheme that allows workers to learn the ability to protect the environment and resolve environmental concerns (Jabbour, 2011). Fernández et al. (2003) claimed that learning will enhance the knowledge and skills of workers about green activities. It is important to train all employees of the company in green management courses. Pun et al. (1998) indicates that the value of protecting the environment can be understood by individuals through GTD. According to Tang et al. (2018), GTD includes three components which are information management, environmental consciousness, and actions to protect the environment. GTD will increase awareness of pro-environmental actions on an individual basis.

Organizational improvements often use educational programs to tackle environmental problems (Jackson et al, 2014; Stalcup et al, 2014). This outlines the company's environmental standards and principles to educate people about the changes required during the initial efforts to protect the environment. Wiernik et al (2013) reported that intervention-based approaches can shape individual behaviour. These approaches guide the organizational training, growth, and change-related educational philosophy and motivation.

Developing specific GTD systems tailored to their business needs is essential for businesses (Perron et al., 2006). It also makes them vulnerable to environmental controls or protection procedures. In fact, companies need to use accredited methods to evaluate learning results. GTD (Daily & Huang, 2001) is responsible for creating an efficient and effective green management structure. In addition, effective management of GHRM includes the organization's GTD programs. Education in environmental management is significant, but not as strong educational programs. However, findings indicate that a key issue for the expansion of learning programs is the lack of green awareness and lack of top management support (Unnikrishnan & Hegde, 2007).

Businesses promoting new and sustainable green management practices include on - the-job environmental management education on a regular basis. Jabbar and Abid (2014) found that the creation of green management values was correlated with talent acquisition, learning, motivation, and compensation. GTD partnerships and environmental management determine the level of employee engagement at all levels of the company (Teixeira et al., 2012). Creating an environmentally friendly



workplace needs comprehensive assessment and performance management training programs.

As conclusion, this study using definition green training and development as Organization develops a program of environmental-related training activities to develop the understanding and expertise of workers of environmental management in the workplace.

#### **2.3.4 Definition and concept of Green Performance Management**

Jabbour and Santos (2008) mentioned that green performance management (GPM) as the method of measuring individual performance by adjusting to green management practices. It is necessary to identify effective ways for organizations to incorporate GPM. Therefore, the general implementation of GPM practices is a priority for many companies.

Furthermore, Shah (2019) defined green performance management (GPM) as organization will appraise employees' environmental results in the whole process of operation to judge their contribution to organizational goals with the vision of environmental management,

In addition, Tang et al. (2018) note that GPM is made up of four elements: designing green targets, setting green benchmarks, evaluating green decisions by members, and generating confusion. Clair et al. (1996) demonstrate that environmental targets need to be translated into workplace action plans.

The concept of green performance indicators allows all workers to create a set of environmental standards in the evaluation and communication of green guidelines. Performance evaluation is most effective in influencing the use of compensation for both executives and staff (Ahmad, 2015). Implementation of enthusiastic green metrics is critical in performance management practices.

Assessing managers of green decisions plays a key role in environmental management, making them accountable for green results. Those who do not meet the environmental achievement criteria are treated unfairly (Renwick et al., 2013). Disbenefit is a negative development that may allow specific drivers in their future business to bend backward for environmental goals.

As conclusion, this study using term green performance management as the company will analyze the environmental effects of workers throughout the operating process to determine their commitment to organizational objectives with an environmental management plan.

### **2.3.5 Definition and concept of Green Compensation Management**

Mandip (2012) and Jabbour et al. (2010) refer green compensation management (GCM) as a competitive activity aimed at attracting and encouraging the workforce to achieve environmental goals. A combination of business-specific benefits and market benchmarks of best practice will address resource allocation issues (Lothe & Myrtveit, 2003).

Ramus and Montiel (2005) recognize the importance of non-monetary rewards in shaping the adoption of European business strategies. Supervisory support and enhanced appreciation are understood to strengthen the willingness of workers to adopt environmental strategies. Jackson and Seo (2010) believe that when individual performance is related to client goals, bonuses are rewarding.

Shah (2019) defined Green compensation management as financial and non-financial rewards for organizational members whose attitude is conducive to environmental management. Non-monetary rewards, such as appreciation and recognition, are necessary to motivate workers, according to Jackson et al. (2011).

Pellegrini et al. (2018) claimed that healthy behavior promotes favorable rewards. Besides financial incentives, Tang et al. (2018) will pay workers for non-financial benefits such as environmental recognition, green tax incentives and green travel benefits.

As conclusion, this study using term green compensation management as Financial and non-financial incentives for members of the organization whose conduct contributes to environmental management.

#### **2.3.6 Definition and concept of Green Health and Safety**

With reference to the Cambridge Dictionary, safety and health refer to laws, regulations, and principles intended to protect people from injury or illness at work and in the public place. Shah (2019) defined green health and safety as the science of expectation, recognition, assessment and control of workplace hazards that may

threaten health and well-being while considering possible environmental influences.

According to the Occupational Safety and Health Administration, by setting up a workplace safety and health management system, the risk of accidents and illnesses can be decreased by 20 to 40 percent. If employees feel safe and comfortable, they will definitely support and contribute to their well-being and satisfaction. Health, safety and well-being are the basic needs of the workforce.

When green manufacturing expands, the incorporation of safety and health in the workplace into the green policy is critical (ILO, 2012). This means incorporating risk assessment and reduction steps into the study of all green jobs throughout the life cycle. Green jobs must integrate safety and health into the policies of design, procurement, service, maintenance, services and recycling, training programs, and standards for workplace safety and health.

Green health and safety management is beyond the context of conventional roles in health and safety management and HRM. Arulrajah et al (2015) noted that many organizations have redefined the role of "Health and Safety Manager" as "Health, Safety and Environmental Manager to ensure a sustainable workplace for all." Companies are constantly concentrating their efforts on various environmental measures to reduce stress on the workers and job-related diseases induced by unhealthy work environments (Shah, 2019).

To order to prevent health problems, several businesses have created strategies to ensure a safe workplace. Arulrajah et al (2015) cited a number of companies implementing approaches to create a conducive environment for improving employees' health and safety, and these factors can be viewed as examples of corporate health and safety management practices.

It is a feature of the GHS management center to provide sustainable workplaces for all employees and protection of the environment and community life. Businesses are increasingly dedicating money to a range of environmental programs to reduce stress on the workforce and job-related diseases induced by unsafe work environments.

As conclusion, this study using term green health and safety as science of predicting, identifying, evaluating and mitigating occupational hazards that could endanger health and well-being while considering potential environmental factors.

### **2.3.7 Definition and concept of Green Labor Relations and Involvement**

The term labor relations, also known as industrial relations, refers to the process through which employers, employees and their representatives and governments engage directly or indirectly to create basic rules for the governance of labor relations (Trebilcock, 2011). The terms "labor relationships" and "industrial relationships" are also used in reference to different forms of labor participation; they may also include individual employment relationships between employers and employees under written or implied employment contracts, although they are generally referred to as "employment relationships."

Employee relations and collective bargaining are important for the implementation of corporate environmental management strategies and initiatives in the sense of GHRM. Labor relations and labor activity should promote the participation and input of stakeholders in environmental activism, problem-solving groups, and proposals of green workers (Shah,2019).

Florida and Davison (2001) propose that the performance of green management systems can be improved by employee involvement in the environment. Inner drivers are correlated with green consciousness (Chinander, 2001). Developing successful eco-friendly initiatives depends on how many comments workers receive on specific environmental issues. In supporting effective green management practices, organizational commitment, individual autonomy, appreciation and reward are important factors (Govindarajulu & Daily, 2004).

The HRM elements of employee motivation, education, collaboration and learning in environmental management are aligned with corporate environmental behavior (Daily & Huang, 2001). Green Involvement (GI) is made up of 5 components which are green learning environment, green vision, GI motivation, interaction, and sustainable practice encouragement (Tang et al., 2018). Employees need to know about the organization's green things that require a range of channels of communication and a sustainable learning environment.

The Green Vision is a sequence of philosophy that inspires green behaviour. This encourages people to participate in practices that are environmentally friendly (shah, 2019). Such an environment encourages people to be aware of their own activities on green initiatives. Across communication channels, a green culture can be developed. Individuals will grow their green behaviors and consciousness in such cultures.

As conclusion, this study using term green labor relation and involvement as broad types include participation, culture support, and tacit knowledge to stimulate member engagement with organization's environmental management when employees are given the opportunity to engage in environmental management

## **2.4 The Relationship between Variables**

The aim of the relationship between variables is to identify and synthesize scientific evidence pertaining for study to answer research questions.

### **2.4.1 Green Job Analysis and Design with OCBE**

As mentioned in chapter 1, there is a less of studies on green job design (GJD) to OCBE. As up to researcher knowledge, less study found related on green job design to OCBE. In order to explain green job design to OCBE, researcher use relationship study on job design to OCB. In general, previous studies related to job design on OCB support the same element but in different contexts compared to green job design to OCBE that are more environmentally focused.

Tufail et al. (2017) analyzed the effect of job design elements, role enhancement, job enrichment and job rotation on the organization of employee citizenship and unproductive work behaviors and found a significant positive relationship between job enhancement and enrichment with OCB and a significant negative relationship between job rotation and OCB. In regards to GJD and OCBE, that workers took on job enhancement and job enrichment related with environment task could help positive behaviour because their jobs become exciting and challenging.

A study of the casual relationship of job design and employee behavior by Muner et al. (2017) also measured the relationship between job design in OCB. In addition, it also confirms with the theory of social exchange that when employees feel

that their organization keeps their personal growth, progress and development in the discharge of their duties, they are satisfied and happy with the organization.

In addition, Dawn & Soeling (2017) builds on the findings reported in other dimensions of HRM job design activities that have a mild impact on OCB. Job design is very important because it explains the variation in work design management to affect the OCB workers. In regards GJD and OCBE, it refers as company effectively design job regarding green could help employee concern about environmental behavior.

Besides that, the direct relationship between job design and additional role play has been announced by Krishnan et al (2014) who found direct impact on perceived job design features, such as feedback, job importance, psychological demands, autonomy and social support to engage in OCB. In context GJD and OCBE, it refer to as company effectively provide perceived green job design features will support employee behaviour for organisation.

Finally, a previous study by Zhang et al (2013) analyzed the expectations of employees regarding high-performance work systems (HPWS) and their effect on employee outcomes such as organizational involvement and organizational citizenship behavior (OCB). Many mediators operating between HPWS and OCB, which could result in the desired results of HR and related to GJD and OCBE, it will help positive relationship within both variables. The following hypothesis is proposed on the basis of the discussion:

*H1. There is a significant relationship between Green Job Analysis and Design (GJD) with OCBE*



#### **2.4.2 Green Recruitment and Selection with OCBE**

Silvester et al (2019) showed a positive relationship between recruitment practices and green selection and OCBE. The organization has placed a high priority on hiring and selecting green for employees and has designed interview processes to assess possible candidate suitability with the organization's green objectives.

Furthermore, the study of Alnajdawi et al., (2017) shows that research analyzing green recruitment and selection affect the development of important employees in an organization through motivational social and psychological processes such as OCBE. Therefore, the dimensions of green HRM practice may be a key factor, which reflects the strength of OCBE.

Depending on the results of the study and as shown by Cheema et al., (2015) and Dutta (2012), it is worth pointing out that green HRM practices encourage the establishment of a green workforce that understands the green culture within the organization through recruitment, training and payment .

On the other hand, Begum et al. (2014) studied the correlation recruitment and selection with OCB in the banking sector. They attempt to clarify how recruitment and selection impact the OCB's dimensions and state that successful attitudes in the hiring and selection process can help companies select the best talented staff who suits the company better.

In regards GRS and OCBE, recruitment and selection setting regarding green application will have a positive impact on the environmental conduct of corporate citizenship in the organization. The following hypothesis is formulated on the basis of the above:

*H2. There is a significant relationship between green recruitment and selection (GRS) with OCBE*

### **2.4.3 Green Training and Development with OCBE**

Silvester et al (2019) shows a positive and positive correlation between green training and development to OCBE. The OCBE of employees can be influenced by the level of green training and development that is carried out in the organization. Green training and development programs through green teams developed for members of the organization must take into account social and environmental features.

The study of Alnajdawi et al., (2017) shows that research analyzing green training and development affects OCBE. Therefore, the dimensions of green HRM practice may be a key factor, reflecting the strength of OCBE. It is fair to point out, based on the study results and as shown by Cheema et al. (2015) and Dutta (2012) that green HRM practices encourage the development of a green workforce that recognizes the green culture of the company through recruiting, training and compensation.

Empirically, Pinzone et al. (2016) illustrate how learning strategies and educators develop environmental skills that inspire employees to go more in eco initiatives and participate in voluntary green actions at work. Employees are better prepared to engage in organizational sustainability projects when companies use strategies to successfully improve their sustainable skills by developing green skills (e.g. green training).

The results of Arulrajah et al (2015) show that OCBE is influenced by training and development in India which brings about environmental awareness among the workforce by providing courses and workshops at all levels of the hierarchy. It is also important to achieve great environmental behaviors and to provide environmental directives that can bring about changes in the state of worker awareness.

Niyomdech & Yahya (2019) study shows that positive significant relationship between training and development with OCBE among administrative staff at Prince of Songkla University (PSU), Hatyai. PSU provides training and development programs to improve their voluntary behavior to separate waste from their workplace and create awareness of the university's waste problems. Based on the above, the following hypothesis is formulated:

*H3. There is a significant relationship between green training and development (GTD) with OCBE*

#### **2.4.4 Green Performance Management with OCBE**

Pham et al. (2019) analyzed the green performance management practices of GHRM in OCBE through a mixed methodology approach for hotels in Vietnam and found that green performance management has a significant linear impact on OCBE. Hotels need to pay more attention to measuring the green quality of workers, offering environmental input, or integrating environmental objectives and obligations to inspire employees to become more willing to take part in hotel environmental initiatives.

The study of Alnajdawi et al., (2017) shows that research on green performance management research influences organizations through motivational social and psychological processes such as OCBE. Therefore, the dimensions of green HRM practice may be a key factor, which reflects the strength of OCBE.

Pinzone et al. (2016) stress the importance of monitoring environmental practices and determining abilities and competencies to enhance eco-behavior of volunteers. Monitoring and assessing the environmental quality and activities of workers is intended to assist employees in gaining accurate environmental data by implementing green voluntary behaviors.

Ahmed (2016) found a positive correlation between performance and rating systems and OCB. Through performance & evaluation criteria, employees will be aware of high-valued organizational behaviors, therefore, directly affecting employee behavior. In context environment, performance and evaluation criteria related with green practise impact directly to OCBE among employee.

Ahmad (2015) indicates that green quality appraisal work will minimize environmental hazards and improve communication on environmental policy that should cross the management line, as well as open space for auditing. Green quality criteria can be modified, and green action metrics can serve as a step-by-step assessment of employee performance. The following hypothesis is proposed on the basis of the discussion:

*H4. There is a significant relationship between green performance management (GPM) with OCBE*

#### **2.4.5 Green Compensation Management and OCBE**

Silvester et al (2019) emphasized that green rewards and compensation contribute most to OCBE. The organization argues that workers should continue to be given green rewards to stimulate environmental activities within the organization. Green rewards and compensation strategies are similar to research results in which acknowledgement and incentive functions as the environmental picture can positively influence workers in adopting green initiatives (Ramus & Steger, 2000).

The study of Alnajdawi et al. (2017) shows that research analyzing green rewards and compensation practices affects OCBE. Therefore, the dimensions of green HRM practice may be a key factor, reflecting the strength of OCBE. Ahmed (2016) reveals that there is little positive relationship between the compensation and reward system and the OCB. This finding is similar to the claim by Ahmad (2013) that high pay will lead to higher OCBs by making employees aware of being respected by the organization and valuable to the organization. It allows employees to make additional efforts in their jobs, thus contributing to OCB.

Previous research by Alkhatani (2015) suggests that employees who exhibit high levels of OCB lead to more promotions and higher pay increases for employees in terms of service within the organization. Workers should be rewarded based on their performance in either the relevant work or the OCB and the merit of paying a plan should be encouraged as they prevent the display of many citizenship behaviors.

Gamage (2014) also gives the idea that the relationship between compensation management and OCB has a very positive relationship with OCB improvement on

workers. Organizations concerned with increasing labor productivity should be prepared to adopt more effective compensation management practices.

In summary, studies by Ahmed (2016), Alkhatani (2015) and Gamage (2014) have relationship between compensation and reward towards OCB. So, in context of environment, the element on these studies contributed effect to green compensation management and OCBE. The following hypothesis is formulated on the basis of the above:

*H5. There is a significant relationship between green compensation management (GCM) with OCBE*

#### **2.4.6 Green Health and Safety with OCBE**

As mentioned in chapter 1, there is less previous study on green health and safety (GHS) to OCBE. As up to researcher knowledge, no study found related on green health and safety to OCBE. In order to explain green health and safety to OCBE, researcher use relationship study on health and safety to OCB. In general, previous studies related to health and safety on OCB support the same element but in different contexts compared to green green health and safety to OCBE that are more environmentally focused.

Testa et al (2018) showed that personal attitude and self-efficacy in health and safety issues positively influence OCB in relation to the environment and that these factors are influenced by organizational support and accepted social norms. Organizational citizenship (OCB) behavior in relation to health and safety, often

shaped by individual and voluntary initiatives, is an important factor for a successful and efficient organization in the firm. In context GHS and OCBE, it refer to organisation effectively provides health and safety element regarding green application could help employee concern about environmental behaviour.

Reader et al (2017) found that where there were more programs to promote the health of workers, offshore workers were more likely to look to their employers to support them, thus demonstrating greater commitment to behaviors of organizational citizenship. It illustrates that citizenship activity is a product of social interaction and provides insight into how organizations within it can affect employee behaviour. In regards GHS and OCBE, it refer to as company effectively support green program within health and safety could help greater behaviour among employees.

Hammer et al (2016) analyzed the effect of programs in health facilities that have a positive relationship between self-reported employee safety enforcement and organizational citizenship attitudes on security compliance and citizenship behaviour. Compliance with safety as an aspect of safety management is most applicable to key safety habits and execution of tasks to ensure beneficial results. In context GHS and OCBE, it refers to as company comply on safety management regarding green application could help positive employee behaviour in organisation.

Hong et al (2011) studied safety management practices and safety behaviors in Small and medium-sized enterprises (SME) in Malaysia and found a positive relationship in overall workplace safety between safety management practices and employee safety behaviors. In an organization's environmental background, managers can see the use of safety management practices as a guide to the actions of their

workers to minimize workplace environmental issues. The following hypothesis is proposed on the basis of the discussion:

*H6. There is a significant relationship between Green Health and Safety (GHS) with OCBE*

#### **2.4.7 Green Labour Relations and Involvement with OCBE**

Pham et al. (2019) analyzed the green involvement activities of GHRM in OCBE through a mixed methodological approach for hotels in Vietnam and found that green involvement has a significant linear impact on OCBE. The participation of workers in environmental projects and events or teams allows them to learn new ideas and to exchange expertise with others.

Saeed et al (2019) studied the effects of green HRM practices on pro-environmental behaviors of workers and found that green involvement practices accounted for 53 percent of their direct impact on pro-environmental behaviors. For organizations with green HRM strategies, the pro-environmental attitudes of workers are improved as their pro-environmental activities are largely informed by their individual environmental behaviour.

Zhang et al (2019) found a positive effect on green behavior and the positive role of green employees in employee involvement. A series of workshops, conferences, forums, and posters can be useful in educating workers about corporate sustainability strategies or programs.



Pinzone et al. (2016) studied the relationship between the contribution of green workers and OCBE as qualitatively understood where all employees have green opportunities. Green initiatives, such as developing seminars and incentives for workers to engage in environmental projects and encouraging them to make and participate in environmental decision-making, help the company improve individual eco-behavior.

Zibarras & Coan (2015) also found that environmental behavior and employee involvement are strongly influenced by organizational size. Environmental behaviors are improved when employees are directly involved in workshops or forums. In addition, organizations need to set up green teams to maintain environmental ties within the organization. The following hypothesis is formulated on the basis of the above:

*H7. There is a significant relationship between Green Labour Relations and Involvement (GLR) with OCBE*

## **2.5 Related theories on the Variables**

Human resource management strategies affect performance in terms of ability, motivation, and opportunity, according to Ability-Motivation-Opportunity theory (Appelbaum et al., 2000). Here, quality is defined as multidimensional (Cochran & Wood, 1984; Jiang et al., 2012) with, for instance, habits of organizational citizenship that are part of human resource results and efficiency (Dyer & Reeves, 1995; et al., 2012). This is particularly relevant because it demonstrates that behavior or motivation is a success by Siemsen et al. (2008).

The theory of social exchange emerged in the late 1950s and with contributions from George Homans, John Thibaut, Harold Kelley, and Peter Blau developed through the early 1960s. Cognitive, sociological, psychological and social economic viewpoints contribute to the development of the theory of social exchange (Emerson, 1976; Cropanzano & Mitchell, 2005). The theory of social exchange is a widely used theory that explains the micro and macro level interplay of human exchange (Emerson, 1976). For organizational planning, it suggests two types of exchange relationships: economic and social. The terms and the corresponding financial rewards in employment relations are simply and contractually bound by economic change.

Human resource management practices may affect individual discretionary or organizational citizenship activities in accordance with the Ability-Motivation-Opportunity model. Hence, in the sense of green, we can see that the application of Ability-Motivation-Opportunity Theory relates to investigating the relationship between GHRM activities and the actions of "green" organizational citizenship (OCBE). In reality, the same approach was used by Pinzone et al. (2016) to assess the impact of GHRM activities on OCBE and collective participation.

In addition, to better explain this relationship, we will also apply the principle of social exchange (Emerson, 1976). This theory suggests that they feel responsible for retaliating when an individual enjoys the rewards of the actions of their company (Jiang et al., 2012). The concept of social exchange is widely used to explain employee turnover actions by applying human resource management policies (Snape & Redman, 2010). From an environmental perspective, OCBE was an important area of research in management studies (e.g. Raineri & Paille, 2016; Robertson & Barling,

2017), which describes one of the reciprocal behaviors. All hypotheses above are therefore sufficient to investigate the impact of GHRM practices on OCBE.

## **2.6 Chapter Conclusion**

This chapter presents the literature on GHRM and OCBE. The review of the literature suggested that combination AMO theory and social exchange theory were focused on the literature as a source to describe GHRM practices within internal form. Although previous studies showed mixed results between GHRM and OCBE, evidence showed that studies mostly indicate positive relationship and the ability of GHRM towards OCBE in manufacturing. The following chapter will describe the research methodology used for this study.



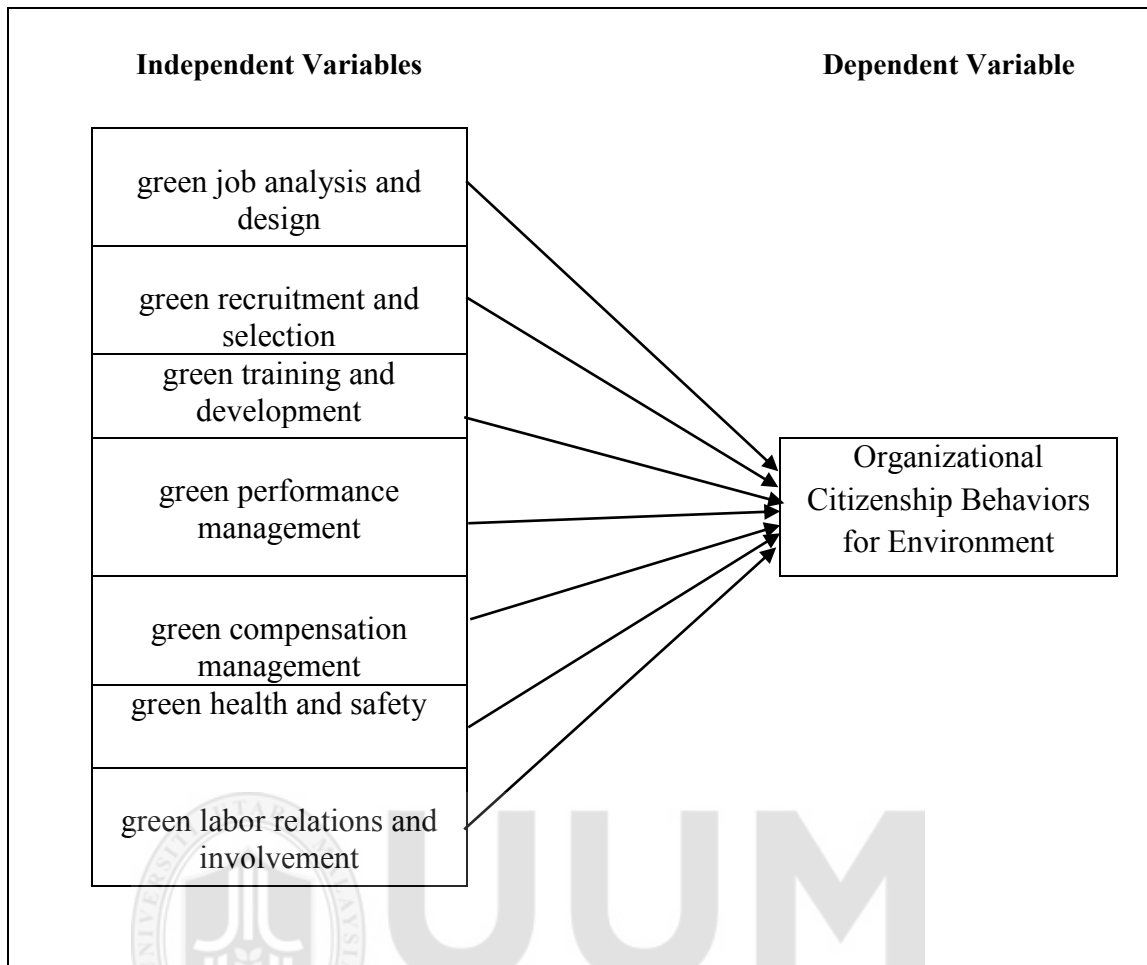
## **CHAPTER THREE : RESEARCH METHODOLOGY**

### **3.1 Introduction**

The purpose of this chapter is to present the methodology used to test the hypotheses. Thus, this chapter elaborates on a theoretical model, hypotheses, research design, data sampling, research instrument as well as analysis of data.

### **3.2 Research Framework and Hypothesis**

This research study the correlation of independent variables, namely Green Human Resource Management (green job analysis and design, green recruitment and selection, green training and development, green performance management, green compensation management, green health and safety, green labor relations and involvement) against Organizational Citizenship Behaviors for Environment as the dependent variable. To examine the relationship between these variables, a theoretical framework model is formed as shown in Figure 3.1 below.



**Figure 3. 1**  
**Research Framework**

Based on the above research framework, the hypotheses as follows:

- H1: There is a significant relationship between Green Job Analysis and Design (GJD) with OCBE.
- H2: There is a significant relationship between Green Recruitment and Selection (GRS) with OCBE
- H3: There is a significant relationship between Green Training and Development (GTD) with OCBE
- H4: There is a significant relationship between Green Performance Management (GPM) with OCBE

- H5: There is a significant relationship between Green Compensation Management (GPM) with OCBE
- H6: There is a significant relationship between Green Health and Safety (GHS) with OCBE
- H7: There is a significant relationship between Green Labor Relations and Involvement (GLR) with OCBE

### **3.3 Research Design**

A blueprint for data collection, measurement and evaluation is the study model (Sekaran & Bougie, 2013). It is therefore very useful to properly design the analysis and to plan ahead to effectively overcome the problem that has risen in the research. The study carried out is a descriptive analysis and inferential analysis in which the author collects data in an effort to systematically explain a situation, problem, trend, program, or provide details about the question. The descriptive analysis attempts to explain the situation or phenomenon that arises and to allow the author to understand the characteristics of the variables involved. This study also defined the relationship between independent variables to dependent variable using quantitative approach and correlational analysis in nature. Through technique, questionnaire-based study applied survey research and data are obtained from cross-sectional or one-shot studies.

The main objective of this analysis is to examine the relationship between independent variables, namely Green Human Resource Management practices (green job analysis and design, green recruitment and selection green training and development, Green Performance Management, Green Compensation Management, Green Health and Safety, green labour relations and involvement) with Organizational Citizenship Behaviors for Environment as the dependent variable. To achieve this

goal, quantitative method was employed. In the quantitative method, a survey research was used in order to determine the relationship between independent variables and dependent variable. According to Babbie (2002), survey research is frequently used mode of observation in social sciences and best method for researcher who is interested to describe large population on original data. Instrument for this studying was used a set of questionnaire

The study was conducted using a self-administered questionnaire in which respondents personally read and answered questions. The questionnaire was distributed individually to employees using google form format. Researchers only help when respondents need some clarification. Then, responses were entered into the Statistical Package Social Science (SPSS) for analysis and to test hypotheses. The aim is to identify correlation using descriptive, factor analysis, reliability and correlation analysis.

### **3.4 Population, Sample and Sampling Method**

Unit of analysis for this study is individual employees who has involved with environmental management in company. Data sampling is an effective technique in which choosing the right subjects representing the entire population is the mechanism (Sekaran & Bougie, 2013). The researcher should be able to draw conclusions by analyzing the sample that would be generalizable to the target population (Sekaran & Bougie, 2013).

### **3.4.1 Population**

For the purpose of this study, Fertilizer Company situated in Kedah is the only organization used for this research. The population size of the fertilizer company is 200 of employees which are consisting of administration and technical section. The targets of the respondents are the employees in both section of administration and technical section in the particular manufacturer with various designations such as general workers, technician, supervisor, executive, engineer and manager. The survey was conducted to all permanent employees only. The working hours of this company divided to normal hours from 8.30 am to 5.15 pm and 12 hours shift which is 7.30 am to 7.30 pm for morning shift and 7.30 pm till 7.30 am for night shift.

### **3.4.2 Sampling Size**



Therefore, to determine the sample size for a finite population, the study follows Krejcie and Morgan (1970) table. The table shows that when population size,  $N=200$ , sample size,  $s=132$  is sufficient to obtain an accurate result. Furthermore, in respect of response rate, Saunders et al (2009) advised researchers used the oversampling technique to attain the right sample size, which can properly represent the target population. Based on that, total 150 questionnaires have been distributed to employees as effort for high response rate and only 145 questionnaires have been collected.



### **3.4.3 Sampling Technique**

In this study, probability sampling has been selected as the sampling technique. The purpose for choosing probability sampling is to avoid bias and all chosen people were given the same opportunity. This is because the possibility of each being chosen is certain. Therefore, random sampling method was chosen due researchers often to saves costs and time and often contributes to acceptable performance.

### **3.4 Measurement and Questionnaire Design**

The questionnaire consists of three sections altogether. Section A consists of 7 items that are geared towards respondent demographic information such as employment position, gender, age, educational background, working experience and two simple questions pertaining to environmental care and concerns. Section B asked on dependent variables which are regarded to Organizational Citizenship Behaviors for Environment. Section C until I of the questionnaire are divided into seven major parts which investigated independent variables of the research, namely green job analysis and design, green recruitment and selection, green training and development, green performance management, green compensation management, green health and safety, green labour relations and involvement.

### 3.4.1 Organizational Citizenship Behaviour for Environment (OCBE)

To capture the data regarding OCBE, the study used the 10 items scale developed by Boiral and Paille (2012). The items were tested previously by Paillé et al. (2014) with reliability value of 0.85. Respondents were required to provide responses for these 10 questions measurement using a 5 point response scale ranging from strongly disagree as number 1 to strongly agree as number 5. The items are shown in Table 3.1.

**Table 3.1**

*Operational Definitions and items for Organizational Citizenship Behaviour for Environment*

Variable	Operational Definitions	Items
<b>Organizational Citizenship Behaviour for Environment</b>	refers to individual and voluntary social behaviors not expressly acknowledged by the formal reward system and leading to organizations ' more effective management of the environment.	<ol style="list-style-type: none"> <li>1. In my work, I weigh my actions before doing something that could affect the environment.</li> <li>2. I voluntarily carry out environmental actions and initiatives in my daily activities at work.</li> <li>3. I make suggestions to my colleagues about ways to more effectively protect the environment, even when it is not my direct responsibility</li> <li>4. I actively participate in environmental events organized in and/or by my company.</li> <li>5. I stay informed about my company's environmental initiatives.</li> <li>6. I undertake environmental actions that contribute positively to my organization's image.</li> <li>7. I volunteer for projects, endeavors or events that address environmental issues in my organization.</li> <li>8. I spontaneously give my time to help my colleagues take the environment into account in everything they do at work.</li> <li>9. I encourage my colleagues to adopt</li> </ol>

	more environmentally conscious behavior.
	10. I encourage my colleagues to express their ideas and opinions on environmental issues.

Source : Boiral and Paillé(2012)

### 3.4.2 Green Job analysis and Design

Four (4) items produced by Shah (2019) are used to test green job design. Shah (2019) tested the items and reliability value is 0.94. The details items and its operational definition are showed in Table 3.2.

**Table 3. 2**  
*Operational Definitions and items for Green Job Design*

Variable	Operational Definitions	Items
<b>Green Job Design</b>	Refers to the process of combining different elements to create a job, taking into account the needs of organizational and individual employees taking environmental issues into consideration.	<ol style="list-style-type: none"> <li>1. My company has integrated several environmental protection responsibilities in each position.</li> <li>2. My company has included green and social needs of the company in job description and specification.</li> <li>3. My company has incorporated green capabilities as a distinctive element in job specification.</li> <li>4. My company has designed and executed innovative positions to emphasize on environmental protection aspects</li> </ol>

Source : Shah(2019)

### 3.4.3 Green Recruitment and Selection

Green Recruitment and Selection items were taken combination from previous study used by Shah (2019) and Yong et.al (2019). To capture the data regarding

Green Recruitment and Selection, the study used 3 items with reliability value 0.93 tested by Shah (2019) to assess the requirement concept and 2 items with composite reliability value 0.968 tested by Yong et.al (2019) to capture selection concept. The details items as per Table 3.3.

**Table 3. 3**  
*Operational Definitions and items for Green Recruitment and Selection*

Variable	Operational Definitions	Items
<b>Green Recruitment and Selection</b>	Organization goal is to select candidates who are dedicated and environmentally sensitive and willing to contribute by internal or external recruitment.	<ol style="list-style-type: none"> <li>1. Our company has incorporated –green aware” criteria in HR staffing policy.</li> <li>2. My company practices the use of paperless recruitment and selection process.</li> <li>3. We appeal to green job applicants who practice green criteria choose employer (green employer branding).</li> <li>4. Employee selection takes environmental motivation into account.</li> <li>5. All selection steps consider environmental questions.</li> </ol>

Source: Shah (2019) and Yong et al (2019)

#### 3.4.4 Green Training and Development

Green Training and Development measured using four (4) items developed by Shah (2019). Shah (2019) tested the items and reliability value is 0.92. The details items and its operational definition are showed in Table 3.4.

**Table 3. 4***Operational Definitions and items for Green Training and Development*

Variable	Operational Definitions	Items
<b>Green Training and Development</b>	Organization develops a program of environmental-related training activities to develop the understanding and expertise of workers of environmental management in the workplace.	<ol style="list-style-type: none"> <li>1. My company assesses who need training in environmental management.</li> <li>2. My company evaluates whether the incumbent has manager and peer support to apply the learned content on the job.</li> <li>3. My organization uses environmental protection elements as the central themes of green training.</li> <li>4. My organization delivers environmental management training to improve employee awareness, skills, and know-how in environmental management.</li> </ol>

Source : Shah (2019)

### 3.4.5 Green Performance Management

Green Performance Management measured using four (4) items developed by Shah (2019). Shah (2019) tested the items and reliability value is 0.92. The details items and its operational definition are showed in Table 3.5.

**Table 3. 5***Operational Definitions and items for Green Performance Management*

Variable	Operational Definitions	Items
<b>Green Performance Management</b>	With an environmental management plan, the company will analyze the environmental effects of workers throughout the operating process to determine their	<ol style="list-style-type: none"> <li>1. Our company establishes green targets, objectives, and duties for each employee across organization.</li> <li>2. In my company, there is communication of green goals.</li> <li>3. The use of green criteria to evaluate performance.</li> <li>4. My company keeps track of non-compliance or not meeting green objectives.</li> </ol>

commitment to organizational objectives.	5.	My company reinforces compliance of meeting environmental goals.
	6.	Identification of “Green Superstars” (remarkably talented individuals who perform beyond the standards) and distribution of prizes based on their green contributions

Source : Shah (2019)

### 3.4.6 Green Compensation Management

Green Compensation Management measured using four (4) items developed by Shah (2019). Shah (2019) tested the items and reliability value is 0.95. The details items and its operational definition are showed in Table 3.6.

**Table 3. 6** *Operational Definitions and items for Green Compensation Management*

Variable	Operational Definitions	Items
<b>Green Compensation Management</b>	Financial and non-financial incentives for members of the organization whose conduct contributes to environmental management.	<ol style="list-style-type: none"> <li>1. Our compensation system recognizes and rewards contributions in environmental protection.</li> <li>2. My company rewards green skills acquisition</li> <li>3. My company rewards for learning a green curricula.</li> <li>4. My company uses non-monetary rewards for contributions in environment management such as paid time off, special leave, and gifts to employees and their families.</li> <li>5. My organization recognizes green initiatives of employees via organization wide publicity and public praise.</li> </ol>

Source : Shah (2019)

### 3.4.7 Green Health and Safety

Green Health and Safety measured using four (4) items developed by Shah (2019). Shah (2019) tested the items and reliability value is 0.90. The details items and its operational definition are showed in Table 3.7.

**Table 3. 7**

*Operational Definitions and items for Green Health and Safety*

Variable	Operational Definitions	Items
<b>Green Health and Safety</b>	Refers to the science of predicting, identifying, evaluating and mitigating occupational hazards that could endanger health and well-being while considering potential environmental factors.	1. My organization provides green workplace for all. 2. My organization takes green initiatives to decrease worker anxiety and work-related sickness instigated by harmful work setting. 3. My organization develops and executes strategies to sustain a favorable work setting to avoid several fitness problems to develop health and safety of workforce.

Source : Shah (2019)

### 3.4.8 Green Labour Relations and Involvement

Green Labour Relations and Involvement measured using four (4) items developed by Shah (2019). Shah (2019) tested the items and reliability value is 0.96. The details items and its operational definition are showed in Table 3.8.

**Table 3. 8***Operational Definitions and items for Green Labour Relations and Involvement*

<b>Variable</b>	<b>Operational Definitions</b>	<b>Items</b>
<b>Green Labour Relations and Involvement</b>	Employees are given the opportunity to engage in environmental management. The broad types include participation, culture support, and tacit knowledge to stimulate member engagement with organization's environmental management.	<ol style="list-style-type: none"> <li>1. Our company emphasizes a culture of environmental protection. Offering green practices.</li> <li>2. My organization offers opportunities to individuals to take part in green suggestion schemes.</li> <li>3. My organization has procedure of green whistle-blowing and helplines.</li> </ol>

---

Source : Shah (2019)

### 3.5 Data Collection

One of the most integral parts in research is data collection. The generation of data for this study is solely obtained from primary data collection. There are various methods to attain data whether through observations, interviews or questionnaire in survey research. This study then applied questionnaire method as it is known to have the advantage of obtaining data efficiently in terms of cost, time and energy (Sekaran & Bougie, 2013). By using questionnaire, respondents were asked questions which relate to the tested variables.

To carry out this study, 150 questionnaire form were sent to the relevant staff in order to obtain the appropriate answers. A questionnaire has been distributed randomly from 25<sup>th</sup> September 2019 until 9<sup>th</sup> October 2019 through emails and personal administrated. The researcher got permission from the top management and



then briefed and obtained the supervisor's permission to meet with the staff to distribute the questionnaire. 3 weeks later, the researcher found 145 out of 150 questionnaires.

### **3.6 Data Analysis**

Analysis of information was done to derive value from the data collected. Research was carried out using a number of techniques for data analysis, including descriptive statistics, analysis of correlation and analysis of regression. A statistical software used to analyze the data for this analysis (SPSS version 24.0 for Windows).

#### **3.6.1 Descriptive Analysis**

To assess the basic characteristics of participants, this analysis used descriptive analyzes. The profile descriptive analyzes consisted of the role of the respondent, gender, age, educational background, work experience and environmental care and concern in that particular company. The descriptive research used was a frequency statistical test.

#### **3.6.2 Factor Analysis**

Study of the parameter was used to determine whether certain items are associated with each other. This facilitates other items, called factors, between comparisons reduced to smaller dimensions. Kaiser and Rice (1974) propose Kaiser-Meyer-Olkin (KMO) as an unacceptable quality below 0.50.

### **3.6.3 Reliability Analysis**

The next data analysis process involved testing the items reliability. Using Cronbach's alpha, the reliability test was performed on all calculated items. The closer the coefficient of reliability gets to 1.0, the higher the reliability, according to Sekaran & Bougie (2013). For general, the coefficient of reliability below 0.60 is considered poor, those within the range of 0.70 are acceptable and those above 0.80 are considered good.

### **3.6.4 Correlation Analysis**

For determining the intensity and direction of linear relationships between two variables, a correlation test is used (Field, 2009). This means testing the relationship and path between the variable dependent and the variable independent. The study acts as an early stage of testing of theories. The correlation intensity can be tested between the ranges of -1 to +1, while the direction can be verified based on (1) the positive value indicating a positive relationship and (2) the negative value indicating a negative relationship.

### **3.7 Pilot Testing**

The pilot test was identified as a small-scale preliminary study before the samples used for the actual test. Pilot testing is characterized as a small scale research

survey by collecting data from a small group of respondents to assess instrument reliability and to evaluate the full scale of research (Zikmund et. al., 2013).

The reliability of questionnaire items is calculated by the use of Cronbach's Alpha ( $\alpha$ ) coefficient, which many researchers commonly use. For Cronbach's alpha, the standard performance levels are between 0 and 1. Better reliability is considered for instruments with coefficients ( $\alpha$ ) closer to 1. The value range 0.8 is considered good reliability and if the coefficients are less than 0.7, reliability is considered poor. Thus the questionnaire items are accurate if the coefficients of the Cronbach reached 0.6. the questionnaire items are inaccurate if the coefficients were less than 0.6 (Sekaran & Bougie, 2010).

Pilot study was conducted for respondents in different departments such as production department, Health and Safety department, Engineering department and Quality Assurance department. The respondents for pilot test will be excluded in actual data collection as to avoid data discrepancies. The consistency of Cronbach's Alpha for each variable was measured and showed in Table 3.9.

**Table 3. 9**  
*Reliability test for pilot test*

Variable				No. of Items	Cronbach's Alpha
Organizational Environment	Citizenship	Behaviour	for	10	0.966
Green Job Design				4	0.733
Green Recruitment and Selection				5	0.747
Green training and development				4	0.848
Green performance monitoring				6	0.789
Green Compensation Management				5	0.814
Green Health and Safety				3	0.861
Green Labour Relations and Involvement				3	0.762

### **3.9 Chapter Conclusion**

This chapter has explained on the method of this research which covered research design, sampling process and instrument, data collection method as well as how data will be analysed. The development and operationalization of the questionnaire also have been presented to show its alignment with the research objectives. The next chapter will present the findings and discussions of results.



## **CHAPTER FOUR : DATA ANALYSIS AND FINDINGS**

### **4.1 Introduction**

This chapter presents about the procedures and steps used in transforming and analyzing the data collected by the questionnaire and also the finding of the study. This chapter will explain in detail about the result that has been received and analyzed, that will include the reliability analysis that will be further explained. Analyses were carried out to present respondent's demographic profile, responses rate and the relationship between independent variables and dependent variables.

### **4.2 Responses Rate**

The questionnaire for this study is distributed by using online google form. Total 150 questionnaires were distributed and as a result, it managed to record 145 data for each items in the form. As shown in the table below, there is no missing data because study managed to get all answers for all items in the questionnaire form and our target sample is 132 people. Study gets the responses from 145 people which are considerably sufficient to carry out the analysis. There is no questionnaire that does not meet criteria and non-usable.

A total of 150 questionnaires were distributed to the respective respondents of fertilizer company. After the process, the researcher gained back a total of 145 responses or 96.6 percent response rate of completed questionnaire.

**Table 4. 1***Total number of questionnaire used for analysis*

<b>Questionnaire</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Total number of questionnaire distributed</b>	150	-
<b>Total number of returned questionnaire</b>	145	-
<b>Total number of questionnaire that does not meet criteria</b>	0	-
<b>Number of questionnaire non usable</b>	0	-
<b>Data available</b>	145	96.6

### **4.3 Respondent's Demographic Profile**

The data collected was entered in SPSS to complete the analysis processes. Frequency analysis was conducted to analyse and describe respondent demographic as regard to section A of the questionnaire. There were seven questions asked on the information related to the respondent's background which includes position, gender, age, level of education, work experience, concern of environmental and environmental care among respondent.

Table 4.2 below shows the details of a descriptive analysis by frequency and percentage. Firstly, most of the respondents were titled as technician with 41.7 percent, while the lowest being a manager with a total of 4.9 percent. Other position includes general worker with 27.8 percent, executive or engineer level with 17.4 percent and supervisor level with 8.3 percent. Out 145 respondents, 128 respondents or 88.9 percent of the respondents are from male employees and 11.1 percent is from the female employees which mean 16 respondents. 1 missing respondent has been mentioned in earlier discussion.

The next demographic characteristic is age of respondents. From the table 4.3, the highest number of respondents is 74 or 51 percent and the range of the age is from 35-44 years old. The next followed by age 25-34 years old, the percentage is 32.4

percent and it has 47 respondents. For age 44-54 years old, the data recorded that there were only 16 respondents and achieve the 11 percent and then group than 25 years old with 5 respondents and contributed 3.4 percent. For the last age group which is more than 54 years old, the number of respondents received is 5 and percentage for the last age group only 4.6 percent.

Afterward, the largest number of respondent's highest level education is the secondary school level, which is accumulated at 39.6 percent (57 people). Respondents' participation in diploma level, degree and certificate level is almost equal. Respondents with diploma level was 29 people (20.1 percent), followed by the technical certificate holder 19.4 percent of 28 people and the degree holder of 27.8 percent which is 27 people. The least respondent education was the master or PHD with only 3 persons. 1 missing respondent has been mentioned as per table 4.2.

In term of working experience, the findings also showed that majority respondents' years of service were from 58 respondents (40 percent) for 11 to 15 years, 51 respondents (35.2 percent) for 5 to 10 years, 23 respondents (15.9 percent) for 16 to 20 years, 11 respondents (7.6 percent) for less than 5 years and 2 respondents (1.4 percent) for the more than 20 year working experience.

Lastly, in terms of environmental demographic, the study asked two questions which related to concern of environmental issues and importance of environmental care. According to Table 4.2, all respondents had concerns about environmental issues and the importance of caring for the environment. Therefore, respondents were the appropriate individuals for this study.

**Table 4. 2**  
*Respondents Demographic*

Characteristic	Frequency (N)	Percentage (100%)
Position		
Manager	7	4.9
Executive/Engineer	25	17.4
Supervisor	12	8.3
Technician	60	41.7
General Worker	40	27.8
Gender		
Male	128	88.9
Female	16	11.1
Age		
Below than 25	5	3.4
25 – 34	47	32.4
35 – 44	74	51.0
44 – 54	16	11.0
More than 54	3	2.1
Education		
Master/PHD	3	2.1
Degree	27	18.8
Diploma	29	20.1
Technical Certificate	28	19.4
Secondary School	57	39.6
Work Experience		
Less than 5 years	11	7.6
5-10 years	51	35.2
11-15 years	58	40
16-20 years	23	15.9
More than 20 years	2	1.4
Concern of environment		
Yes	145	100
Environmental care		
Yes	145	100

#### 4.4 Factor Analysis

The factorability of the items was initially investigated and several well-recognized element matrix factorability parameters have been used. In table 4.4 below, the Kaiser-Meyer-Olkin (KMO) test the sampling adequacy was 0.785 for the factor OCBE, 0.814 for the factor GJD, GRS, GTD and GPM, and finally 0.857 for the factor GCM, GHS and GLR. All- eight factors that have being mentioned



commonly recommended value of 0.6 and Bartlett's test of sphericity was significant for all elements.

In this analysis, five items have been removed due to failure in meeting with the minimum criteria of having a primary factor. The 4 items that have been removed are OCBE2, OCBE4, OCBE5 and OCBE7, the presence of the items loaded heavily on one factor question. The next item that has been removed is from GTD1 because this item does not substantially burden any element. All other items were retained.

Eight factors were accepted in this study. Based on the table 4.3 below, the first factor which is Organizational Citizenship Behaviors for Environment (OCBE) consists of six items (OCBE1, OCBE3, OCBE6, OCBE8, OCBE9, OCBE10) after four factor has been removed. The second factor referred to green job design consists of four items overall (GJD1, GJD2, GJD3, GJD4). The third factor is green recruitment and selection which consists of six items (GRS1, GRS2, GRS3, GRS4, GRS5, GTD2). Item GTD2 joined green recruitment and selection factor after rotated component matrix process.

The fourth factor is green training and development which consists of five items (GTD3, GTD 4, GPM4, GPM5, GPM6) after one item (GTD1) has been removed and GTD2 transferred to GRS factor. In additionally, 3 items which is GPM4, GPM5 and GPM6 joined green training and development factor after rotated component matrix process. The fifth factor is green performance management which consists of three items (GPM1, GPM2, GPM3) after three items which is GPM4, GPM5 and GPM6 have been transferred to GTD factor.

The sixth factor is green compensation management which consists of five items (GCM1, GCM2, GCM3, GCM4, GCM5) and maintain original items

component matrix process. The seventh factor is green health and safety which consists of three items also (GHS1, GHS2, GHS3) and lastly, the eighth factor is green labour relations and involvement which consists of 3 items also (GLR1, GLR2, GLR3) after component matrix test. A detailed summary of the exploratory factor analysis is shown in Table 4.4 below.

**Table 4. 3**  
*Factor Analysis*

	Component							
	1	2	3	4	5	6	7	8
<b>OCBE1</b>	0.621							
<b>OCBE3</b>	0.730							
<b>OCBE6</b>	0.701							
<b>OCBE8</b>	0.655							
<b>OCBE9</b>	0.781							
<b>OCBE10</b>	0.776							
<b>GJD1</b>		0.549						
<b>GJD2</b>		0.778						
<b>GJD3</b>		0.671						
<b>GJD4</b>		0.722						
<b>GRS1</b>			0.684					
<b>GRS2</b>			0.682					
<b>GRS3</b>			0.597					
<b>GRS4</b>			0.766					
<b>GRS5</b>			0.681					
<b>GTD2</b>			0.510					
<b>GTD3</b>				0.528				
<b>GTD4</b>				0.564				
<b>GPM4</b>				0.838				
<b>GPM5</b>				0.853				
<b>GPM6</b>				0.516				
<b>GPM1</b>					0.812			
<b>GPM2</b>					0.758			
<b>GPM3</b>					0.698			
<b>GCM1</b>						0.731		
<b>GCM2</b>						0.754		
<b>GCM3</b>						0.807		
<b>GCM4</b>						0.641		
<b>GCM5</b>						0.804		
<b>GHS1</b>							0.700	
<b>GHS2</b>							0.661	
<b>GHS3</b>							0.752	
<b>GLR1</b>								0.783

<b>GLR2</b>	0.832							
<b>GLR3</b>	0.825							
<b>KMO</b>	0.785	0.814	0.814	0.814	0.814	0.857	0.857	0.857
<b>Bartlett's test</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Dependent Variable: Organizational Citizenship Behaviors for Environment (OCBE)

Independent Variables: green job analysis and design(GJD), green recruitment and selection(GRS), green training and development(GTD), green performance management(GPM), green compensation management(GCM), green health and safety(GHS), green labour relations and involvement(GLR)

**Table 4. 4**  
*Summary of Exploratory Factors Analysis*

<b>Variable</b>	<b>Original Item</b>	<b>Final Item</b>
Organizational citizenship behavior in environment (OCBE)	<ul style="list-style-type: none"> <li>- 10 items (OCBE1, OCBE2, OCBE3, OCBE4, OCBE5, OCBE6, OCBE7, OCBE8, OCBE9, OCBE10)</li> <li>- 4 items (OCBE2, OCBE4, OCBE5, OCBE7) items have been deleted due to cross loading</li> </ul>	6 items (OCBE1, OCBE3, OCBE6, OCBE8, OCBE9, OCBE10)
Green Job Design (GJD)	<ul style="list-style-type: none"> <li>- 4 items (GJD1, GJD2, GJD3, GJD4)</li> </ul>	4 items (GJD1, GJD2, GJD3, GJD4)
Green Recruitment and Selection (GRS)	<ul style="list-style-type: none"> <li>- 5 items (GRS1, GRS2, GRS3, GRS4, GRS5)</li> <li>- 1 items (GTD2) join group after rotated component matrix</li> </ul>	6 items (GRS1, GRS2, GRS3, GRS4, GRS5, GTD2)
Green Training and development (GTD)	<ul style="list-style-type: none"> <li>- 4 items (GTD1, GTD2, GTD3, GTD4)</li> <li>- GTD1 has been deleted due to cross loading</li> <li>- GTD2 transferred to group GRS due rotated component matrix</li> <li>- GPM4, GPM5, GPM6 join group after rotated component matrix</li> </ul>	5 items (GTD3, GTD4, GPM4, GPM5, GPM6)
Green Performance Monitoring (GPM)	<ul style="list-style-type: none"> <li>- 6 items (GPM1, GPM2, GPM3, GPM4, GPM5, GPM6)</li> <li>- GPM4, GPM5, GPM6 transferred to group GTD due rotated component</li> </ul>	3 items (GPM1, GPM2, GPM3)

	matrix	
Green compensation Management (GCM)	- 5 items ( GCM1, GCM2, GCM3, GCM4, GCM5)	5 items (GCM1, GCM2, GCM3, GCM4, GCM5)
Green Health Safety (GHS)	- 3 items (GHS1,GHS2,GHS3)	3 items (GHS1,GHS2,GHS3)
Green Labor and Relation Involvement (GLR)	- 3 items (GLR1,GLR2,GLR3)	3 items (GLR1,GLR2,GLR3)

#### 4.5 Reliability Analysis

Reliability analysis is used to construct variables and measurement scales, also wants to improve existing scale and to evaluate the reliability scale that has been used. The result of the Cronbach Alpha's value range will determine the acceptability and reliability for the items of independent and dependent variables. The internal consistency reliability of the variables was obtained through the coefficient from the Cronbach Alpha.

The result of the reliability for all the variables shows that the entire construct and items are reliable because all variables achieved the coefficient range more than 0.6. 0.6 is the moderate range and it can be minimally accepted. As shown in the table 4.6, for the first variable which is the dependent variables, the reliability test is 0.842 and it has 6 items for Organizational citizenship behavior in environment which is very good range.

For independent variables, green job design has 4 items and has 0.739 range of Cronbach's Alpha which is acceptable, same goes to the green recruitment and

selection that has 6 items and achieved 0.777 and next variable which is green training and development has 5 items of questionnaire and achieved 0.749. Green Performance Management has achieved 0.801 with 3 items and the high value for Cronbach's alpha is 0.867 which is green compensation management with 3 items of questionnaire. Next is green health and safety that has 0.715 and green labor relation and involvement achieved 0.795, which is very acceptable for both variables.

**Table 4. 5**  
*Reliability coefficient results*

<b>Variables</b>	<b>Item</b>	<b>Cronbach's Alpha</b>
OCBE	6 items	0.842
GJD	4 items	0.739
GRS	6 items	0.777
GTD	5 items	0.749
GPM	3 items	0.801
GCM	5 items	0.867
GHS	3 items	0.715
GLR	3 items	0.795

#### **4.6 Pearson Correlation Analysis**

Pearson Correlation Coefficient refers to the techniques used to measure the degree of association between two variables and their value ranging from negative 1.0 to positive 1.0. The coefficient of comparison is symbolized with "r." If r is positive 1.0, it represents a complete linear positive (straight-line) relationship. Perfect linear negative relationship or sometimes referred to as a perfect inverse relationship is of negative r value 1.0. Generally speaking, the greater the significance of reference to one, the stronger the association between variables. By comparison, the relationship between variables becomes weaker if the correlation value drops to zero. The rules of thumb of the correlation coefficient are shown below:

**Table 4. 6***Rules of thumb about correlation coefficient*

<b>Coefficient Range</b>	<b>Strength of Association</b>
$\pm 0.91 - \pm 1.00$	Very strong
$\pm 0.71 - \pm 0.90$	Strong
$\pm 0.41 - \pm 0.70$	Moderate
$\pm 0.21 - \pm 0.40$	Low but definite relationship
$\pm 0.00 - \pm 0.20$	Slight, almost negligible

Source: Hair, Wolfinbarger, Money, Samouel, and Page (2011).

**Table 4. 7***The result of the Correlation*

		<b>OCBE</b>	<b>GJD</b>	<b>GRS</b>	<b>GTD</b>	<b>GPM</b>	<b>GCM</b>	<b>GHS</b>	<b>GLR</b>
<b>OCBE</b>	Pearson Correlation	1							
	Sig. (2-tailed)								
<b>GJD</b>	Pearson Correlation	0.448**	1						
	Sig. (2-tailed)	0.000							
<b>GRS</b>	Pearson Correlation	0.273**	0.391**	1					
	Sig. (2-tailed)	0.001	0.000						
<b>GTD</b>	Pearson Correlation	0.354**	0.393**	0.375**	1				
	Sig. (2-tailed)	0.000	0.000	0.000					
<b>GPM</b>	Pearson Correlation	0.293**	0.383**	0.288**	0.436**	1			
	Sig. (2-tailed)	0.000	0.000	0.000	0.000				
<b>GCM</b>	Pearson Correlation	0.292**	0.375**	0.343**	0.550**	0.377**	1		
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000			
<b>GHS</b>	Pearson Correlation	0.256**	0.357**	0.288**	0.441**	0.277**	0.625**	1	
	Sig. (2-tailed)	0.002	0.000	0.000	0.000	0.001	0.000		
<b>GLR</b>	Pearson Correlation	0.216**	0.261**	0.179*	0.325**	0.062	0.326**	0.450**	1
	Sig. (2-tailed)	0.009	0.002	0.031	0.000	0.460	0.000	0.000	

\*. Correlation is significant at the 0.05 level (2-tailed)

\*\*. Correlation is significant at the 0.01 level (2-tailed)

#### **4.6.1 Green job analysis and design with OCBE**

**H1: There is a significant relationship between green job design with OCBE.**

There is a significant and moderate strength relationship between the green job design with OCBE and a positive correlation ( $r=0.448$ ,  $p<0.01$ ). The correlation analysis supports that the green job design have a significant positive relationship with Organizational Citizenship Behaviors for Environment (OCBE), therefore, H1 is supported.

#### **4.6.2 Green Recruitment and Selection with OCBE**

**H2: There is a significant relationship between green recruitment and selection with OCBE.**

There is a significant and low strength relationship between the green recruitment and selection with OCBE and a positive correlation ( $r=0.273$ ,  $p<0.01$ ). The correlation analysis supports that the green recruitment and selection have a significant positive relationship to Organizational Citizenship Behaviors for Environment (OCBE); therefore, H2 is supported.

#### **4.6.3 Green training and development with OCBE**

**H3: There is a significant relationship between green training and development with OCBE**

There is a significant and low strength relationship between the green training and development with OCBE and a positive correlation ( $r=0.354$ ,  $p<0.01$ ). The correlation analysis supports that the green training and development have a significant positive relationship to Organizational Citizenship Behaviors for Environment (OCBE); therefore, H3 is supported.

#### **4.6.4 Green performance management with OCBE**

**H4: There is a significant relationship between green performance management with OCBE.**

There is a significant and low strength relationship between the green performance management with OCBE and a positive correlation ( $r=0.293$ ,  $p<0.01$ ). The correlation analysis supports that the green performance management have a significant positive relationship to Organizational Citizenship Behaviors for Environment (OCBE); therefore, H4 is supported.

#### **4.6.5 Green compensation management with OCBE**

**H5: There is a significant relationship between green compensation management with OCBE.**

There is a significant and low strength relationship between the green compensation management with OCBE and a positive correlation ( $r=0.292$ ,  $p<0.01$ ). The correlation analysis supports that the green compensation management have a significant positive



relationship to Organizational Citizenship Behaviors for Environment (OCBE); therefore, H5 is supported.

#### **4.6.6 Green health and safety with OCBE**

**H6: There is a significant relationship between green health and safety with OCBE.**

There is a significant and low strength relationship between the green health and safety with OCBE and a positive correlation ( $r=0.256$ ,  $p<0.01$ ). The correlation analysis supports that the green health and safety have a significant positive relationship to Organizational Citizenship Behaviors for Environment (OCBE); therefore, H6 is supported.

#### **4.6.7 Green labour relations and involvement with OCBE**

**H7: There is a significant relationship between green labour relations and involvement with OCBE.**

There is a significant and low strength relationship between the green labour relations and involvement with OCBE and a positive correlation ( $r=0.216$ ,  $p<0.01$ ). The correlation analysis supports that the green labour relations and involvement have a significant positive relationship to Organizational Citizenship Behaviors for Environment (OCBE); therefore, H7 is supported.

#### 4.7 Hypothesis Testing

The researcher developed the seven hypotheses in the present study, and all explanations were accepted. The result and hypotheses status of the analysis is can be refer summary of hypotheses as per table 4.8.

**Table 4. 8**  
*Hypothesis Summary*

	<b>Hypotheses</b>	<b>Significant/ Not Significant</b>	<b>Decision</b>
H1	There is a significant relationship between green job design with OCBE.	Sig at $p=0.000$ ; $p<0.05$ with $R=0.448$	Support
H2	There is a significant relationship between green recruitment and selection with OCBE.	Sig at $p=0.000$ ; $p<0.05$ with $R=0.273$	Support
H3	There is a significant relationship between green training and development with OCBE	Sig at $p=0.000$ ; $p<0.05$ with $R=0.354$	Support
H4	There is a significant relationship between green performance management with OCBE.	Sig at $p=0.000$ ; $p<0.05$ with $R=0.293$	Support
H5	There is a relationship between green compensation management with OCBE.	Sig at $p=0.000$ ; $p<0.05$ with $R=0.292$	Support
H6	There is a relationship between green health and safety with OCBE.	Sig at $p=0.000$ ; $p<0.05$ with $R=0.256$	Support
H7	There is a relationship between green labour relations and involvement with OCBE.	Sig at $p=0.000$ ; $p<0.05$ with $R=0.216$	Support

#### **4.8 Chapter Conclusion**

This chapter discusses about the result retrieved from SPSS version 24. Descriptive analyses and reliability analysis were performed on the data collected. Pearson Correlation test show a significant role in this study as it is use to confirm the relationship between independent and dependent variables. The study concluded that seven hypotheses which are green job design, green recruitment and selection, green training and development, green performance management, green compensation management, green health and safety, green labour relations and involvement toward Organizational Citizenship Behaviors for Environment (OCBE), hence the hypotheses are accepted.



## **CHAPTER FIVE : DISCUSSION AND CONCLUSION**

### **5.1 Introduction**

This chapter concludes and summarizes the finding and results of the study. The chapter also explains a little more on the relationship between variables, the limitations of the study, the suggestions for future research and also the overall conclusion from what have been discussed in this study.

### **5.2 Discussion**

This study examined the relationship between green job design, green recruitment and selection, green training and development, green performance management, green compensation management, green health and safety, green labor relations and involvement with organizational citizenship behaviors for environment (OCBE). The result shows the significant relationship between all the seven independent variables and OCBE from the test performed using SPSS.

#### **5.2.1 The Relationship between GJD and OCBE**

In this study, the relationship between green job analysis and design with OCBE is significant with a positive relationship. Due less study related on green job design with OCBE, relationship between job analysis and design with OCB were used for support relationship on green job design with OCBE.

The positive relationship in this study was supported by tufail et al.(2017) that also found out job enlargement and job enrichment have positive significant to OCB. Moreover, based on the research by (krishan et al, 2014), it can be seen that job design elements which is job importance, psychological demand, feedback, autonomy and social has positive relationship in their OCB. Other than that, Dawn & Soeling (2017), they did a research on ICT company and they found out that the employees in ICT company were no strong indication to encourage OCB activities but the variable job design and OCB were significantly related in their findings.

Furthermore, from the study Zhang et al (2013), found that high performance work system and OCB have positively related to job satisfaction and the result shows several mediators working between variables that could lead to the desired HR results. Next, Muner et al (2017) also found that job design and OCB will influence the work of employees. The study also confirms that social exchange theory also influences the relationship between job design and OCB.

In regards GJD and OCBE, it argues that effective organization job design in relation to the environment can help improve OCBE among employees and it support positively significant relationship between GJD and OCBE.

### **5.2.2 The Relationship between GRS with OCBE**

In this study, the relationship between green recruitment and selection with OCBE is significant with a positive relationship. This was supported by Silvester et al (2019), the study concluded that green recruitment and selection have positive significant towards OCBE. It is because when by giving high priority to recruitment

and selection for high-performing green workers will create an organizational environment objective. Next, it is also supported by Alnajdawi et al (2017), the researcher concluded that green recruitment and selection as one of the factors that will effect to the OCBE. Green recruitment and selection positive significant of Cronbach's Alpha, which mean the test is reliable and significantly related to OCBE.

### **5.2.3 The Relationship between GTD with OCBE**

In this research, with a positive relationship, the relationship between green training and development with OCBE is important. Silvester et al (2019) stated that there is a positive relationship between green training and development and OCBE as a whole after conducting research among employees of the company. (Alnajdawi et al, 2017) also found that OCBE has a moderate effect on green training and development among Manaseer group employees in Jordan.

In addition, Pinzone (2016) also suggested that the research has a positive significant relationship between green training and OCBE among healthcare workers. Employees are better prepared to engage in workplace environmental projects when companies through green training efficiently increase their environmental efficiency. Next Arulrajah et al (2015) found that the research between green training and development and OCBE in India were significantly correlated. The study sponsored by Niyomdechcha & Yahya (2019) found that in the sense of administrative staff at Prince of Songkla University, training and development had a positive relationship with OCBE.

#### **5.2.4 The Relationship between GPM with OCBE**

In this research, with a positive relationship, the relationship between green performance management with OCBE is important. The findings of their study show that there was a positive linear relationship between green performance management and OCBE among hotel employees in Vietnam, supported by Pham et al. (2019). The study also noted that green performance management is also part of their motivation to employees who are more willing to take part in the environmental initiatives of the hotel in order to make them feel good about their jobs.

Furthermore, Alnajdawi et al (2017) also found that the relationship between green performance management and OCBE and employee satisfaction in the Manaser Company was significant. While green performance management and OCBE had a marginally significant impact, it still affects the employees. In addition, Pinzone et al (2016) suggests that assessing environmental practices and assessing skills and competencies in enhancing volunteer eco-behavior has resulted in a successful Green Performance Management and OCBE partnership among employees.

#### **5.2.5 The Relationship between GCM with OCBE**

In this study, the relationship between green compensation management with OCBE is significant with a positive relationship. This was supported by Silvester et al (2019) that also found out strong significant relationship between green compensation management and OCBE at manufacturing company in Petaling Jaya, Selangor. The study also argues that workers should continue to be given green rewards to stimulate environmental activities within the organization

In addition, based on the research carried out by (Alnajdawi et al, 2017), it can be seen that workers are pleased with their organizational green reward and compensation activity. On that basis, green reward and rewards in their OCBE have a positive relationship and become one element of green HRM practice represents OCBE's strength.

#### **5.2.6 The Relationship between GHS with OCBE**

In this study, the relationship between green health and safety with OCBE is significant with a positive relationship. Due less study related on green health and safety with OCBE, relationship between health and safety with OCB were used for support relationship on green green health and safety with OCBE.

The positive relationship in this study was supported by Testa et al (2018), the study concluded that health and safety have positive influence towards OCB. It is because personal attitude and self-efficacy are influenced by organizational support and accepted social behaviour. Furthermore, reader et al (2017) also confirms this, the author concluded that health and safety is one of the variables that will contribute to behaviors of organizational citizenship. Employees tend to support the company when there are more programs to promote the wellbeing of the employee, and this gives an idea of how the organization can affect the actions of the employee.

In context GHS and OCBE, it refer to organisation effectively provides health and safety element and program regarding green application could help employee concern about environmental behaviour. In other word, it could help support significant positive relationship between GHS and OCBE.



### **5.2.7 The Relationship between GLR with OCBE**

In this study, the relationship between green labour relations and involvement with OCBE is significant with a positive relationship. This was supported by Pham et al (2019) mentioned that there is a strong relationship between green involvement and OCBE as a whole after they did a research among hotel employees. (Saeed et al, 2019) also found that green involvement moderately influence employees' behaviors with 53 percent of their impact on proenvironmental behaviors.

In addition, Zhang et al (2019) also suggested that there is a significant positive relationship in the study between green involvement and green behaviors among green employees. A series of workshops, conferences and events will keep employees informed about the organization's sustainability, while at the same time improving their environmental behaviour. Next, Pinzone et al (2016) found that the data between green engagement and OCBE were significantly correlated. Individual behavior within an organization can grow as employees take part in environmental decision-making.

Another study supported by Zibarras & Coan (2015), which has been found that employee involvement was having strong relationship with environmental behavior. Organizations need to provide green teams to maintain environmental relationships within the organization and at the same time increase employee involvement and green behavior.

### **5.3 Recommendations**

To improve on the OCBE among employees, company or organization should consider encouraging and promoting all seven constructs of green HRM. Due of employees become one of medium to publicized on organization, GHRM practices are a way to employees behave and support the organization in public eyes on environments issues.

Organization need to continual analyses and describe employee's job description not only linked to their usual environmental activities but also further environmental obligations in their work. Besides that, organization need also aware of importance of training for employees. Employees must attend training, briefing and sharing program related on environmental management to help in developing their green behavior.

Employees need embrace goodwill related on environment issues at the workplace whether the condition are not highly desirable and also not complaining about the status. Employees desire to help others while not expecting any compensation.

### **5.4 Suggestions for Future Research**

This study was conducted to identify the key findings of the relationship between green job design, green recruitment and selection green training and development, green performance management, green compensation management, green health and safety, green labor relations and involvement in organizational citizenship behaviors for the environment (OCBE). Future research will concentrate on a larger sample and population, extending their study even more, like more than

one client. Besides that, to prove the study results, diverse samples of workers from different industries or sectors should be included.

## **5.5 Theoretical and Practical Implications**

This study provides additional empirical evidence in the work literature through studies on the impact of green job design, green recruitment and selection green training and development, green performance management, green compensation management, green health and safety, green labor relations and employee involvement in OCBE. For this analysis, this study used the theory of AMO and social exchange because it coincides with the study.

First, the AMO theory claims that green human resource management practices and techniques relate to organizational success, based on the employee's ability motivation, and opportunity to develop habits that support the organization. Therefore, green human resource management practices planned component of ability (job design, recruitment and selection training and development), component of motivation (performance management, compensation management) and component of opportunity (labor relations and involvement health and safety) will enhance employee environmental citizenship behaviour.

Next, with regard to the theory of social exchange, companies focus on providing role design, recruitment and selection training and development and health-safety services for workers and creating opportunities through performance management, compensation management and labor relations and involvement that can reciprocate the environmental citizenship behavior of employees.

## **5.6 Conclusions**

As conclusion, the study has successful achieved all objective has been developed in chapter 1. The study start with confirmed the issues of dependent variable and independent variables which be explain in chapter 1. In chapter 1, research question and research objective also develop.

Further in chapter 2, summarize of concept and development of hypothesis. The methodology aspect of study been discussed in chapter 3 included design study, research sampling, questionnaire design, research instrument, data collection procedure and pilot testing.

Next, chapter 4 discussed that data analysis and research finding. From the research finding, it reported all seven green HRM dimension has significant relationship with OCBE. Conclusively, this study achieved all seven objective of study and study recommended organization should focus on effective GHRM practice towards enhancing employee OCBE.

## REFERENCESS

- Afsar, B., Cheema, S., & Javed, F. (2018). Activating employee's pro-environmental behaviors: The role of CSR, organizational identification, and environmentally specific servant leadership. *Corporate Social Responsibility and Environmental Management*, 25(5), 904-911.
- Ahmed, N. O. A. (2016). Impact of human resource management practices on organizational citizenship behavior: An empirical investigation from banking sector of Sudan. *International Review of Management and Marketing*, 6(4), 964-973.
- Alkahtani, A. (2015). Organizational citizenship behavior (OCB) and rewards. *International Business Research*, 8(4), 210.
- Alnajdawi, S., Emeagwali, O. L., & Elrehail, H. (2017). The interplay among green human resource practices, organization citizenship behavior for environment and sustainable corporate performance: evidence from Jordan. *Journal of Environmental Accounting and Management*, 5(3), 171-184.
- Amran, SNM ( 9 Julai 2019) kedah-nafi-kualiti-udara-di-sungai-petani-tak-sihat .Berita Harian Online. Retrived from <https://www.bharian.com.my/berita/wilayah/2019/07/583041/>
- Armstrong, M. (2003). A Handbook of Management Techniques. London: Kogan Page Limited
- Arulrajah, A. A., Opatha, H. H. D. N. P., & Nawaratne, N. N. J. (2015). Green Human Resource Management Practices : A Review Literature Review on Green HRM Practices. *Sri Lankan Journal of Human Resource Management*, 5(1), 1-16.
- Azid, A., Juahir, H., Toriman, M. E., Endut, A., Kamarudin, M. K. A., Rahman, M. N. A., ... Yunus, K. (2015). Source apportionment of air pollution: A case study in Malaysia. *Jurnal Teknologi*, 72(1), 83-88. <https://doi.org/10.11113/jt.v72.2934>.
- Appelbaum, E., Bailey, T., Berg, P., & Kalleberg, A. L. (2000). Manufacturing Advantage: Why high-performance work systems pay off. New York: Cornell University Press.

- Ali, H., & Aroosiya, M. (2012). Impact of job design on employees' performance. Retrieved from <http://www.kln.ac.lk/fcms/ICBI2012/images/ICBM/dccs/Microsoft%20Word%20-%20HRM013.pdf>
- Ahmad, S. (2015), Green Human Resource Management: Policies and practices, *Cogent Business & Management* 2(1), <http://doi.org/10.1080/23311975.2015.1030817>.
- Babbie, E. (2002). The basics of social research, ed. Belmont, Calif, London: Wadsworth/Thomson Learning.
- Bauer, T. N., & Aiman-Smith, L. (1996). Green career choices: The influence of ecological stance on recruiting. *Journal of Business and Psychology*, 10(4), 445–458. <https://doi.org/10.1007/BF02251780>
- Becker, G. S., (1968). Crime and punishment: An economic approach. *Journal of Political Economy*, 76(2), 169-217.
- Begum, S., Zehou, S., Sarker, M.A.H. (2014), Investigating the relationship between recruitment & selection practice and OCB dimensions of commercial banks in China. *International Journal of Academic Research in Management (IJARM)*, 3(2), 146-154.
- Brekke, K. A., & Nyborg, K. (2008). Attracting responsible employees: Green production as labor market screening. *Resource and Energy Economics*, 30(4), 509–526. <https://doi.org/10.1016/j.reseneeco.2008.05.001>
- Boiral, O. (2002). Tacit knowledge and environmental management. *Long Range Planning*, 35(3), 291–317. [https://doi.org/10.1016/S0024-6301\(02\)00047-X](https://doi.org/10.1016/S0024-6301(02)00047-X)
- Boiral, O., & Paillé, P. (2012). Organizational citizenship behavior for the environment: Measurement and validation. *Journal of Business Ethics*, 109(4), 431- 446.
- Buzzle. (2015, May 11). Water Pollution Statistics. Retrieved October 23, 2019, from <http://www.buzzle.com/articles/water-pollution-statistics.html>.

- Cambridge University Press. (2019). *Cambridge online dictionary*, Cambridge Dictionary online. Retrieved at Oct 3, 2019, from the website <https://dictionary.cambridge.org/dictionary/english/health-and-safety>
- Cheema S., Pasha A. T., & Javed F. (2015). Green Human Resource Practices: Implementations and Hurdles of SMEs in Pakistan. *Journal of Business Studies Quarterly*, 7(2), 231-241.
- Cheema S, Afsar B, Javed F.(2019) Employees' corporate social responsibility perceptions and organizational citizenship behaviors for the environment: The mediating roles of organizational identification and environmental orientation fit. *Corp Soc Resp Env Ma*. 2019;1–13. <https://doi.org/10.1002/csr.1769>
- Cohan, M. A. (1999). Monitoring and enforcement of environmental policy. In H. Folmer, & T. Tietenberg, (Ed.), *The international yearbook of environmental and resource economics 1999/2000 a survey of current issues* (pp. 44-79). Edward Elgar Publishing, UK.
- Chaneta, I. (2011). Supporting workers' performance at work-place through job designing. *Journal of Comprehensive Research*. Retrieved from <http://jupapadoc.startlogic.com/compresearch/papers/JCR11-1.pdf>
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of management*, 31(6), 874-900.
- Crosbie, L., & Knight, K. (1995). *Strategy for sustainable business: Environmental opportunity and strategic choice*. McGraw-Hill Companies.
- Cochran, P. L., & Wood, R. A. (1984). Corporate social responsibility and financial performance. *Academy of Management Journal*, 27(1), 42-56.
- Dangelico, R. M. (2015). Improving firm environmental performance and reputation: The role of employee green teams. *Business Strategy and the Environment*, 24(8), 735–749. <https://doi.org/10.1002/bse.1842>

- Dechant, K., & Altman, B. (1994). Environmental leadership: From compliance to competitive advantage. *Academy of Management Perspectives*, 8(3), 7–20. <https://doi.org/10.5465/ame.1994.9503101163>
- De Groot, J. I., & Steg, L. (2010). Relationships between value orientations, self-determined motivational types and pro-environmental behavioural intentions. *Journal of Environmental Psychology*, 30(4), 368-378.
- Del Brío, J. Á., Fernández, E., & Junquera, B. (2007). Customer interaction in environmental innovation: The case of cloth diaper laundering. *Service Business*, 1(2), 141–158. <https://doi.org/10.1007/s11628-006-0011-x>
- Department of Environment (DOE) Kedah, Malaysia (2019). Seminar Pengukuhan Pematuhan Terhadap Peraturan-Peraturan Alam Sekeliling. Unpublished.
- Dyer, L., & Reeves, T. (1995). Human resource strategies and firm performance: What do we know and where do we need to go? *International Journal of Human Resource Management*, 6(3), 656–670.
- Dessler, G., & Tan, C. H. (2006). Human resource management: An Asian perspective. Pearson Prentice Hall.
- Durai, P. (2010). Human Resource Management. New Delhi: Pearson Education
- Daily, B. F., & Huang, S. C. (2001). Achieving sustainability through attention to human resource factors in environmental management. *International Journal of Operations & Production Management*, 21(12), 1539–1552. <https://doi.org/10.1108/01443570110410892>
- Daily, B. F., Bishop, J. W., & Govindarajulu, N. (2009). A conceptual model for organizational citizenship behavior directed toward the environment. *Business & Society*, 48(2), 243–256. <https://doi.org/10.1177/0007650308315439>
- Dutta, S. (2012). Greening people: A strategic dimension. *ZENITH: International Journal of Business Economics & Management Research*, 2, 143-148.
- Economic Planning Unit. (2015). Eleventh Malaysia plan, 2016-2020: Anchoring growth on people. *Putrajaya: Prime Minister's Department*.



- Ehnert, I., Parsa, S., Roper, I., Wagner, M., & Muller-Camen, M. (2016). Reporting on sustainability and HRM: A comparative study of sustainability reporting practices by the world's largest companies. *International Journal of Human Resource Management*, 27(1), 88–108. <https://doi.org/10.1080/09585192.2015.1024157>
- Emerson, R. M. (1976). Social exchange theory. *Annual review of sociology*, 2(1), 335-362.
- Fajar, A. P., & Soeling, P. D. (2017, December). The Effect of HRM Practices on Employee Organizational Citizenship Behavior in ICT Companies. In *1st International Conference on Administrative Science, Policy and Governance Studies (ICAS-PGS 2017) and the 2nd International Conference on Business Administration and Policy (ICBAP 2017)*. Atlantis Press.
- Fayyazia, M., Shahbazmoradib, S., Afsharc, Z., & Shahbazmoradic, M.R. (2015). Investigating the barriers of the green human resource management implementation in oil industry, *Management Science Letters*, 5, 101–108.
- Fernández, E., Junquera, B., & Ordiz, M. (2003). Organizational culture and human resources in the environmental issue: A review of the literature. *International Journal of Human Resource Management*, 14(4), 634–656. <https://doi.org/10.1080/0958519032000057628>
- Field, A. (2009). *Discovering Statistics Using SPSS*. SAGE Publications (3rd editio). SAGE Publications. <https://doi.org/10.1234/12345678>
- Friedman, F. (2003). *Practical guide to environmental management*. Environmental Law Institute.
- Gamage, A. S. (2014). Organizational Citizenship Behaviour among Employees in SMEs in Japan: An Analysis of the Link with HRM Practices. *Kindai management review*, 2(1).
- Grolleau, G., Mzoughi, N., & Pekovic, S. (2012). Green not (only) for profit: An empirical examination of the effect of environmental-related standards on employees' recruitment. *Resource and Energy Economics*, 34(1), 74–92. <https://doi.org/10.1016/j.reseneeco.2011.10.002>

- Guerci, M., Montanari, F., Scapolan, A., & Epifanio, A. (2016). Green and non-green recruitment practices for attracting job applicants: Exploring independent and interactive effects. *International Journal of Human Resource Management*, 27(2), 129–150. <https://doi.org/10.1080/09585192.2015.1062040>
- Guerci, M., Longoni, A., & Luzzini, D. (2016). Translating stakeholder pressures into environmental performance—the mediating role of green HRM practices. *The International Journal of Human Resource Management*, 27(2), 262-289.
- Hammer, L. B., Johnson, R. C., Crain, T. L., Bodner, T., Kossek, E. E., Davis, K. D. & Berkman, L. (2016). Intervention effects on safety compliance and citizenship behaviors: Evidence from the work, family, and health study. *Journal of Applied Psychology*, 101(2), 190.
- Hong, K. T., Surienty, L., & Hung, D. K. M. (2011). Safety management practices and safety behaviour: A preliminary investigation in Malaysian small and medium enterprises in Northern Corridor Economic Region (NCER). *Journal Occupational Safety & Health*, 8, 1-11.
- Hsieh, A.T., & Chao, H.Y. (2004). A reassessment of the relationship between job specialization, job rotation and job burnout: example of Taiwan's high-technology industry. *The International Journal of Human Resource Management*, 15:6, 1108-1123
- International Labour Office (ILO). (2012). Promoting safety and health in a green economy.
- Jabbour, C. J. C., & Santos, F. C. A. (2008). The central role of human resource management in the search for sustainable organizations. *The International Journal of Human Resource Management*, 19(12), 2133–2154. <https://doi.org/10.1080/09585190802479389>
- Jabbour, C. J. C., Santos, F. C. A., & Nagano, M. S. (2010). Contributions of HRM throughout the stages of environmental management: Methodological triangulation applied to companies in Brazil. *The International Journal of Human Resource Management*, 21(7), 1049–1089. <https://doi.org/10.1080/09585191003783512>

- Jabbour, C. J. C. (2011). How green are HRM practices, organizational culture, learning and teamwork? A Brazilian study. *Industrial and Commercial Training*, 43(2), 98–105. <https://doi.org/10.1108/00197851111108926>
- Jabbour, C. J. C., de Sousa Jabbour, A. B. L., Govindan, K., Teixeira, A. A., & de Souza Freitas, W. R. (2013). Environmental management and operational performance in automotive companies in Brazil: the role of human resource management and lean manufacturing. *Journal of Cleaner Production*, 47, 129–140.
- Jackson, S. E., Renwick, D. W. S., Jabbour, C. J. C., & Muller-Camen, M. (2011). State-of-the-art and future directions for green human resource management. *German Journal of Research in Human Resource Management*, 25(2), 99–116. <https://doi.org/10.1177/239700221102500203>
- Jackson, S. E., Schuler, R. S., & Jiang, K. (2014). An aspirational framework for strategic human resource management. *Academy of Management Annals*, 8(1), 1–56. <https://doi.org/10.5465/19416520.2014.872335>
- Jiang, K., Lepak, D. P., Hu, J., & Baer, J. C. (2012). How does human resource management influence organizational outcomes? A meta-analytic investigation of mediating mechanisms. *Academy of Management Journal*, 55(6), 1264–1294.
- Jones, D. A., & Willness, C. R. (2013). Corporate social performance, organizational reputation and recruitment. In K. Y. Trevor Yu & D. M. Cable (Eds.), *The Oxford handbook of recruitment* (pp. 298–313). USA: Oxford Univeristy Press.
- Jun, L. P. (2016). Malaysia's labour market and job creation under the economic transformation program (ETP) 2011 to 2015.
- Kaiser, H. F., & Rice, J. (1974). Little jiffy, mark IV. *Educational and psychological measurement*, 34(1), 111-117.
- Kim, A., Kim, Y., Han, K., Jackson, S. E., & Ployhart, R. E. (2017). Multilevel influences on voluntary workplace green behavior: Individual differences, leader behavior, and coworker advocacy. *Journal of Management*, 43(5), 1335-1358.

- Kim, K. Y., Pathak, S., & Werner, S. (2015). When do international human capital enhancing practices benefit the bottom line? An ability, motivation, and opportunity perspective. *Journal of International Business Studies*, 46(7), 784-805.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.
- Krishnan, R., Alias, M. A., & Kanchymalay, K.(2014), –The Influencing Role of Work Design Characteristics on Extra Role Performance of Employees,” *World Journal of Management Vol. 5 No. 2*, 5(2), pp. 1– 13.
- Kuchinka, D., Balazs, S., Gavriltea, M., & Djokic, B. B. (2018). Consumer attitudes toward sustainable development and risk to brand loyalty. *Sustainability*, 10(4), 997.
- Lamm, E., Tosti-Kharas, J., & Williams, E. G. (2013). Read this article, but don't print it: Organizational citizenship behavior toward the environment. *Group & Organization Management*, 38(2), 163–197.  
<https://doi.org/10.1177/1059601112475210>
- Longoni, A., Luzzini, D., & Guerci, M. (2018). Deploying environmental management across functions: the relationship between green human resource management and green supply chain management. *Journal of Business Ethics*, 151(4), 1081-1095.
- Lülf R, Hahn R. 2013. Corporate greening beyond formal programs, initiatives, and systems: a conceptual model for voluntary pro-environmental behavior of employees. *European Management Review* 10: 83–98.
- Masri, H. A., & Jaaron, A. A. M. (2017). Assessing green human resources management practices in Palestinian manufacturing context: An empirical study. *Journal of Cleaner*
- Mustakim, N. S., Ramli, M. W., & Weng, C. N. (2019). The community awareness towards river pollution issue in Sungai Pinang, Pulau Pinang. *Geografia-Malaysian Journal of Society and Space*, 15(3).
- Mohammad, N. (2011). Urban Environmental Pollution in Malaysia: A Case Study. *British Journal of Humanities and Social Sciences*, 3(1), 46-57.

- May, D. R., & Flannery, B. L. (1995). Cutting waste with employee involvement teams. *Business Horizons*, 38(5), 28–39. [https://doi.org/10.1016/0007-6813\(95\)90033-0](https://doi.org/10.1016/0007-6813(95)90033-0)
- Milkovich, G. T., & Boudreau, J. W. (2000). *Human Resource Management*. Boston: Richard D. Irwin.
- Mishra, R. K., Sarkar, S., & Kiranmai, J. (2014). Green HRM: Innovative approach in Indian public enterprises. *World Review of Science, Technology and Sustainable Development*, 11(1), 26–42. <https://doi.org/10.1504/WRSTSD.2014.062374>
- Muneer, S., Jamil, K., & Idrees, M. (2017). A Study of Casual Relationship of Job Design and Employee Behavior. *Information Management and Business Review*, 9(6), 26-35.
- Nagendra, A., & Kansal, S. (2014). Reducing carbon foot prints through green HRM. *International Research Conference on Innovative Business Strategies*.
- Nejati, M., Rabiei, S., & Jabbour, C. J. C. (2017). Envisioning the invisible: Understanding the synergy between green human resource management and green supply chain management in manufacturing firms in Iran in light of the moderating effect of employees' resistance to change. *Journal of Cleaner Production*, 168, 163-172.
- Niyomdech, L., & Yahya, K. K. (2019). Examining The Relationship Between Human Resource Management Practices And Organizational Citizenship Behavior For Environment Among Administrative Staff In A Thailand University. *Sains Humanika*, 11(2-2).
- Nobari, A., Seyedjavadin, S., Roshandel Arbatani, T., Rahnamay Roodposhti, F. (2018). Environmental concerns and green human resource management: A meta-synthesis. *Plant Physiology*, 8(4), 2573-2576. doi: 10.22034/ijpp.2018.543510
- Nurul, A. M., Oliver, L. H. L., & Dashimah, O. (2014). Human Health and Wellbeing: Human health effect of air pollution. Built & Natural Environment, Universiti Teknologi MARA, 40450 Shah Alam, Malaysia.
- Organ, D. W. (1997). Organizational citizenship behavior: It's construct clean-up time. *Human Performance*, 10(2), 85–97. [https://doi.org/10.1207/s15327043hup1002\\_2](https://doi.org/10.1207/s15327043hup1002_2)

- Oosterveer, P., Kamolsiripichaiporn, S., & Rasiah, R. (2006). The 'greening' of industry and development in southeast Asia: perspectives on industrial transformation and environmental regulation; introduction. *Environment, Development and Sustainability*, 8(2), 217-227.
- Opatha, H. H. D. N. P., & Arulrajah, A. A. (2014). Green human resource management: Simplified general reflections. *International Business Research*, 7(8). <https://doi.org/10.5539/ibr.v7n8p101>
- Occupational Safety and Health Administration. (2019, October 3). Retrieved from [www.OSHA.gov](http://www.OSHA.gov)
- Paillé, P., Chen, Y., Boiral, O., & Jin, J. (2014). The impact of human resource management on environmental performance: An employee-level study. *Journal of Business Ethics*, 121(3), 451-466.
- Paillé, P., Amara, N., & Halilem, N. (2018). Greening the workplace through social sustainability among co-workers. *Journal of Business Research*, 89, 305-312.
- Pellegrini, C., Rizzi, F., & Frey, M. (2018). The role of sustainable human resource practices in influencing employee behavior for corporate sustainability. *Business Strategy and the Environment*, 27(8), 1221-1232. <https://doi.org/10.1002/bse.2064>
- Perron, G. M., Côté, R. P., & Duffy, J. F. (2006). Improving environmental awareness training in business. *Journal of Cleaner Production*, 14(6-7), 551-562. <https://doi.org/10.1016/j.jclepro.2005.07.006>
- Pham, N. T., Phan, Q. P. T., Tučková, Z., Vo, N., & Nguyen, L. H. (2018). Enhancing the organizational citizenship behavior for the environment: the roles of green training and organizational culture. *Management & Marketing. Challenges for the Knowledge Society*, 13(4), 1174-1189.
- Pham, N. T., Tučková, Z., & Jabbour, C. J. C. (2019). Greening the hospitality industry: How do green human resource management practices influence organizational citizenship behavior in hotels? A mixed-methods study. *Tourism Management*, 72, 386-399.
- Pham, N. T., Hoang, H. T., & Phan, Q. P. T. (2019). Green human resource management: a comprehensive review and future research agenda. *International Journal of Manpower*.

- Pinzone, M., Guerci, M., Lettieri, E., & Redman, T. (2016). Progressing in the change journey towards sustainability in healthcare: The role of “Green” HRM. *Journal of Cleaner Production*, 122, 201-211.
- Prasad, R.S. (2013). Green HRM- partner in sustainable competitive growth. *Journal Management Science Technology*, 1, 15-18.
- Pun, K. F., Fung, Y. K., & Wong, F. Y. (1998, December). Identification of critical factors for total quality environmental management. In *Proceedings of the 3rd annual international conference on industrial engineering theories, applications and practice* (No. 114, pp. 1–9).
- Ramus CA, Killmer ABC. (2007).Corporate greening through prosocial extra role behaviours – a conceptual framework for employee motivation. *Business Strategy and the Environment* 16: 554–570.
- Rani, S., & Mishra, K. (2014). Green HRM: Practices and strategic implementation in the organizations. *International Journal on Recent and Innovation Trends in Computing and Communication*, 2(11), 3633–3639.
- Razab, M. F. A., & Udin, Z. M. (2016). Creating A Great Action In The Employee Circle: From The Green Five Taxonomy. *Iqtishoduna: Journal of Islamic Economy*, 10 (1), 28-32.
- Raineri, N., & Paille, P. (2016). Linking corporate policy and supervisory support with environmental citizenship behaviors: The role of employee environmental beliefs and commitment. *Journal of Business Ethics*, 137(1), 129-148.
- Reader, T. W., Mearns, K., Lopes, C., & Kuha, J. (2017). Organizational support for the workforce and employee safety citizenship behaviors: A social exchange relationship. *Human Relations*, 70(3), 362-385.
- Ren, S., Tang, G., & Jackson, S. E. (2018). Green human resource management research in emergence: A review and future directions. *Asia Pacific Journal of Management*, 35(3), 769-803.
- Rinkesh. (2016, January 17). Sources and Causes of Water Pollution - Conserve Energy Future. Retrieved October 23, 2019, from Pollution, <http://www.conserveenergy->

future.com/sources-and-causes-of-water-pollution.php.

Renwick, D., Redman, T., & Maguire, S. (2008). Green HRM: A review, process model, and research agenda. *University of Sheffield Management School Discussion Paper, 1*, 1-46.

Renwick, D. W. S., Redman, T., & Maguire, S. (2013). Green human resource management: A review and research agenda\*. *International Journal of Management Reviews, 15*(1), 1–14. <https://doi.org/10.1111/j.1468-2370.2011.00328.x>

Renwick, D. W., Jabbour, C. J., Muller-Camen, M., Redman, T., & Wilkinson, A. (2016). Contemporary developments in Green (environmental) HRM scholarship.

Robertson, J. L., & Barling, J. (2017). Toward a new measure of organizational environmental citizenship behavior. *Journal of Business Research, 75*, 57–66.

Roome, N. (1992). Developing environmental management strategies. *Business Strategy and the Environment, 1*(1), 11–24. <https://doi.org/10.1002/bse.3280010104>

Saeed, B. B., Afsar, B., Hafeez, S., Khan, I., Tahir, M., & Afridi, M. A. (2019). Promoting employee's proenvironmental behavior through green human resource management practices. *Corporate Social Responsibility and Environmental Management, 26*(2), 424-438.

Saunders, M., Lewis, P., & Thornhill, A. (2009). Research methods for business students. Essex. *Financial Times/Prentice Hall*.

Sekaran, U., & Bougie, R. (2010). Theoretical framework in theoretical framework and hypothesis development. *Research methods for business: A skill building approach, 80*.

Sekaran, U., & Bougie, R. (2013). *Research Methods for Business: A Skill Building Approach* (6th editio). John Wiley & Sons Ltd.

Shah, M. (2019). Green human resource management: Development of a valid measurement scale. *Business Strategy and the Environment*.

Snape, E., & Redman, T. (2010). HRM practices, organizational citizenship behaviour, and performance: A multi-level analysis. *Journal of Management Studies, 47*(7), 1219–1247



- Stalcup, L. D., Deale, C. S., & Todd, S. Y. (2014). Human resources practices for environmental sustainability in lodging operations. *Journal of Human Resources in Hospitality & Tourism*, 13(4), 389–404. <https://doi.org/10.1080/15332845.2014.888508>
- Siemens, E., Roth, A. V., & Balasubramanian, S. (2008). How motivation, opportunity, and ability drive knowledge sharing: The constraining-factor model. *Journal of Operations Management*, 26(3), 426–445.
- Siyambalapitiya, J., Zhang, X. and Liu, X. (2018), –Green human resource management: a proposed model in the context of Sri Lanka’s tourism industry”, *Journal of Cleaner Production*, Vol. 201, pp. 542-555.
- Silvester, Y., Sarip, A., & Hassan, M. A.(2019) The Relationship between Green HRM Practices and Organizational Citizenship Behavior toward Environment (OCBE).JoMOR 2019, Vol1,No.18
- Tan, H. S., & Salleh, N. A. (2017). Green manufacturing industry: Solving of minimization of pollution and waste in Kedah.
- Tang, G., Chen, Y., Jiang, Y., Paillé, P. and Jia, J. (2018), –Green human resource management practices: scale development and validity”, *Asia Pacific Journal of Human Resources*, Vol. 56 No. 1, pp. 31-55.
- Testa, F., Corsini, F., Gusmerotti, N. M., & Iraldo, F. (2018). Predictors of organizational citizenship behavior in relation to environmental and health & safety issues. *The International Journal of Human Resource Management*, 1-34.
- The Borneo Post (2016) *Kesedaran pematuhan undang-undang, standard alam Sekitar masih kurang*. Retrieved on October 18, 2016 from <http://www.theborneopost.com/2016/05/20/kesedaran-pematuhan-undang-undang-standard-alam-sekitar-masih-kurang/>
- The Borneo Post (2016) *JAS ambil pendekatan menjurus kepada pematuhan sendiri*. Retrieved on October 18, 2016 from <http://www.theborneopost.com/2016/08/03/jas-ambil-pendekatan-menjurus-kepada-pematuhan-kendiri/>
- Tuttle, T., & Heap, J. (2007). Green productivity: moving the agenda. *International Journal of Productivity and Performance Management*, 57(1), 93-106.

- Tufail, M. S., Bashir, M., & Shoukat, N. (2017). Impact of job design on employee's organizational citizenship behavior and counterproductive work behavior in the banking sector of Faisalabad. *City University Research Journal*, 225-235.
- Trebilcock, A. (2011). Labour Relations and Human Resources Management: An Overview. *Geneva: ILO available online at [www.ilo.org/iloenc/part iii](http://www.ilo.org/iloenc/part%20iii)*.
- Unnikrishnan, S., & Hegde, D. S. (2007). Environmental training and cleaner production in Indian industry—A micro-level study. *Resources, Conservation and Recycling*, 50(4), 427–441. <https://doi.org/10.1016/j.resconrec.2006.07.003>
- Valase, K., & Raut, D. N. (2019). Mediation analysis of multiple constructs in the relationship between manufacturing and technology and environmental constructs in structural equation model for sustainable manufacturing. *The International Journal of Advanced Manufacturing Technology*, 101(5-8), 1887-1901.
- Wesselink, R., Blok, V., & Ringersma, J. (2017). Pro-environmental behaviour in the workplace and the role of managers and organisation. *Journal of cleaner production*, 168, 1679-1687.
- Wehrmeyer, W. (1996). *Greening people: Human resource and environmental management*. New York: Greenleaf.
- Wiernik, B. M., Ones, D. S., & Dilchert, S. (2013). Age and environmental sustainability: A meta-analysis. *Journal of Managerial Psychology*, 28(7/ 8), 826–856. <https://doi.org/10.1108/JMP-07-2013-0221>
- Yong JY, Yusliza MY, Ramayah T, Chiappetta Jabbour CJ, Sehnem S, Venkatesh M. (2019). Pathways towards sustainability in manufacturing organizations: Empirical evidence on the role of green human resource management. *Bus Strat Env*;1–17 <https://doi.org/10.1002/bse.2359>
- Yusmani MY, & Yusliza MY. (2015). Strategic green human resource management as a critical success factors for environmental performance in Malaysia. *CGHRM*, 163.
- Yusmani MY.(2018). Linking Green Human Resource Management Bundle to Environmental Performance in Malaysia's Hotel Industry: The Mediating Role of Organizational Citizenship Behaviour towards Environment.

- Yusmani MY., Ramayah, T., & Othman, N. (2015). Why examining adoption factors, HR role and attitude towards using E-HRM is the start-off in determining the successfulness of green HRM? *Journal Advance Management Science*, 3, 337-343.
- Zakaria BK (14 march 2019). Peruntukan-kecemasan-rm64-juta-bersih-sungai-kim-kim. Berita Harian Online. Retrived from <https://www.bharian.com.my/berita/nasional/2019/03/540816/>
- Zaid, A. A., Jaaron, A. A., & Bon, A. T. (2018). The impact of green human resource management and green supply chain management practices on sustainable performance: An empirical study. *Journal of cleaner production*, 204, 965-979.
- Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2003). Research methods. *Health economics research method*, 2.
- Zikmund, W. G., Carr, J. C., Babin, B., & Griffin, M. (2013). *Business research methods*. Nelson Education.
- Zulkifli Abd. Rahman & Hazrina Salleh (2015) Sharing of Enforcement Experiences and Compliance Monitoring in Malaysia. *Proceeding of Regional Conference on Next Generation Compliance in Asia*, 21-23 September 2015. AECEN. Bangkok, Thailand.
- Zhang, Y., Luo, Y., Zhang, X., & Zhao, J. (2019). How Green Human Resource Management Can Promote Green Employee Behavior in China: A Technology Acceptance Model Perspective. *Sustainability*, 11(19), 5408.
- Zibarras, L. D., & Coan, P. (2015). *HRM practices used to promote pro-environmental behavior: a UK survey*. *The International Journal of Human Resource Management*, 26(16), 2121–2142. doi:10.1080/09585192.2014.972429
- Zhang M., Fan D.D. and Zhu C.J. (2013). High-Performance Work Systems, Corporate Social Performance and Employee Outcomes: Exploring the Missing Links. *Journal of Business Ethics*, DOI 10.1007/s10551-013-1672-8, @ Springer Science+Business Media Dordrecht.

## APPENDICES

### APPENDIX A: QUESTIONNAIRE

**Dear Sir/Madam**

**Ref: Relationship between Green Human Resource Management (GHRM) and Organizational Citizenship Behaviour for Environment (OCBE) in Manufacturing company.**

I am pleased to inform you of the aforementioned study aim to assess relationship the Green Human Resource Management (GHRM) and Organizational Citizenship Behaviors for Environment (OCBE). The study covers green job design, green recruitment and selection, green training and development, green performance Management, green compensation management, green health and safety, green labour relations and involvement,. For this purpose, we are approaching a number of employees to participate in a survey relating to their experiences in implementing GHRM and OCBE.

I would very much appreciate your participation, since the success of the research is dependent upon receiving the maximum number of responses. Your answer will of course be treated confidentially and the information will only be used for the purpose of this study.

We look forward to receive your completed questionnaire as soon as possible and many thanks for your kind support and co-operation.

Yours sincerely,

MOHD FAIZAL BIN MOHD ROFI

MSc Candidate

Universiti Utara Malaysia

**Section A: Demographic**

Demographic	
Please tick (✓) in appreciate box	
a.	Your position:

	<input type="checkbox"/> Manager <input type="checkbox"/> Executive/Engineer <input type="checkbox"/> Supervisor <input type="checkbox"/> Technician / clerk <input type="checkbox"/> General Worker
b.	Gender <input type="checkbox"/> Male <input type="checkbox"/> Female
c.	Your Age <input type="checkbox"/> below than 25 <input type="checkbox"/> 25 - 34 <input type="checkbox"/> 35 - 44 <input type="checkbox"/> 44 - 54 <input type="checkbox"/> More than 54
e.	Your highest level of education? <input type="checkbox"/> Master/PHD <input type="checkbox"/> Degree <input type="checkbox"/> Diploma <input type="checkbox"/> Technical Certificate <input type="checkbox"/> Secondary school <input type="checkbox"/> primary school
d.	Working experience? <input type="checkbox"/> Less than 5 years <input type="checkbox"/> 5 - 10 years <input type="checkbox"/> 11 – 15 years <input type="checkbox"/> 16 – 20 years <input type="checkbox"/> More than 20 years
e.	You are concerned about the environmental issues <input type="checkbox"/> Yes <input type="checkbox"/> No
f.	You know the importance of environmental care <input type="checkbox"/> Yes <input type="checkbox"/> No

### Section B: Organizational Citizenship Behaviour for Environment (OCBE)

OCBE
Please indicate to what extent you agree/disagree the following statement (Please circle 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree)

1.	In my work, I weigh my actions before doing something that could affect the environment.	1	2	3	4	5
2.	I voluntarily carry out environmental actions and initiatives in my daily activities at work.	1	2	3	4	5
3.	I make suggestions to my colleagues about ways to more effectively protect the environment, even when it is not my direct responsibility	1	2	3	4	5
4.	I actively participate in environmental events organized in and/or by my company.	1	2	3	4	5
5.	I stay informed about my company_s environmental initiatives.	1	2	3	4	5
6.	I undertake environmental actions that contribute positively to my organization_s image.	1	2	3	4	5
7.	I volunteer for projects, endeavors or events that address environmental issues in my organization.	1	2	3	4	5
8.	I spontaneously give my time to help my colleagues take the environment into account in everything they do at work.	1	2	3	4	5
9.	I encourage my colleagues to adopt more environmentally conscious behavior.	1	2	3	4	5
10.	I encourage my colleagues to express their ideas and opinions on environmental issues.	1	2	3	4	5

### Section C: Green Job Design

Green Performance Monitoring						
Please indicate to what extent you agree/disagree the following statement (Please circle 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree)						
1.	My company has integrated several environmental protection responsibilities in each position	1	2	3	4	5
2.	My company has included green and social needs of the company in job description and specification	1	2	3	4	5
3.	My company has incorporated green capabilities as a distinctive element in job specification.	1	2	3	4	5
4.	My company has designed and executed innovative positions to emphasize on environmental protection aspects.	1	2	3	4	5

### Section D: Green Recruitment and Selection

Green Recruitment and Selection						
---------------------------------	--	--	--	--	--	--

Please indicate to what extent you agree/disagree the following statement (Please circle 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree)					
1.	Our company has incorporated –green aware” criteria in HR staffing policy	1	2	3	4 5
2.	My company practices the use of paperless recruitment and selection process.	1	2	3	4 5
3.	We appeal to green job applicants who practice green criteria choose employer (green employer branding).	1	2	3	4 5
4.	Employee selection takes environmental motivation into account	1	2	3	4 5
5.	All selection steps consider environmental questions	1	2	3	4 5

### Section E : Green Training and Development

Green Training and Development					
Please indicate to what extent you agree/disagree the following statement (Please circle 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree)					
1.	My company assesses who need training in environmental management.	1	2	3	4 5
2.	My company evaluates whether the incumbent has manager and peer support to apply the learned content on the job.	1	2	3	4 5
3.	My organization uses environmental protection elements as the central themes of green training.	1	2	3	4 5
4.	My organization delivers environmental management training to improve employee awareness, skills, and know-how in environmental management..	1	2	3	4 5

### Section F : Green Performance Monitoring

Green Performance Monitoring
------------------------------

Please indicate to what extent you agree/disagree the following statement (Please circle 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree)		
5.	Our company establishes green targets, objectives, and duties for each employee across organization.	1 2 3 4 5
6.	In my company, there is communication of green goals.	1 2 3 4 5
7.	The use of green criteria to evaluate performance.	1 2 3 4 5
8.	My company keeps track of non-compliance or not meeting green objectives.	1 2 3 4 5
9.	My company reinforces compliance of meeting environmental goals	1 2 3 4 5
10.	Identification of —Green Superstars” (remarkably talented individuals who perform beyond the standards) and distribution of prizes based on their green contributions	1 2 3 4 5

#### Section G : Green Compensation Management

Green Compensation Management		
Please indicate to what extent you agree/disagree the following statement (Please circle 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree)		
1.	Our compensation system recognizes and rewards contributions in environmental protection.	1 2 3 4 5
2.	My company rewards green skills acquisition	1 2 3 4 5
3.	My company rewards for learning a green curricula.	1 2 3 4 5
4.	My company uses non-monetary rewards for contributions in environment management such as paid time off, special leave, and gifts to employees and their families.	1 2 3 4 5
5.	My organization recognizes green initiatives of employees via organization wide publicity and public praise.	1 2 3 4 5

#### Section G : Green Health and Safety



<b>Green Health and Safety</b>					
Please indicate to what extent you agree/disagree the following statement (Please circle 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree)					
1.	My organization provides green workplace for all.	1	2	3	4 5
2.	My organization takes green initiatives to decrease worker anxiety and work-related sickness instigated by harmful work setting.	1	2	3	4 5
3.	My organization develops and executes strategies to sustain a favorable work setting to avoid several fitness problems to develop health and safety of workforce	1	2	3	4 5

#### Section H : Green Labour Relations and Involvement

<b>Green Labour Relations and Involvement</b>					
Please indicate to what extent you agree/disagree the following statement (Please circle 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree)					
1.	Our company emphasizes a culture of environmental protection. Offering green practices.	1	2	3	4 5
2.	My organization offers opportunities to individuals to take part in green suggestion schemes.	1	2	3	4 5
3.	My organization has procedure of green whistle-blowing and helplines.	1	2	3	4 5

## APPENDIX B : Respondents Demographic Analysis

		Statistics						
		Position	Gender	age	education	work_experience	concern_env	env_care
N	Valid	144	144	145	144	145	145	145
	Missing	1	1	0	1	0	0	0
Mean		3.70	1.11	2.76	3.76	2.68	1.00	1.00
Median		4.00	1.00	3.00	4.00	3.00	1.00	1.00
Mode		4	1	3	5	3	1	1
Percentiles	25	3.00	1.00	2.00	3.00	2.00	1.00	1.00
	50	4.00	1.00	3.00	4.00	3.00	1.00	1.00
	75	5.00	1.00	3.00	5.00	3.00	1.00	1.00

		Position			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	Manager	7	4.8	4.9	4.9
	Exe/Eng	25	17.2	17.4	22.2
	SV	12	8.3	8.3	30.6
	Tech	60	41.4	41.7	72.2
	GW	40	27.6	27.8	100.0
	Total	144	99.3	100.0	
Missing	System	1	.7		
Total		145	100.0		

		Gender			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	Male	128	88.3	88.9	88.9
	female	16	11.0	11.1	100.0
	Total	144	99.3	100.0	
Missing	System	1	.7		
Total		145	100.0		

		age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	below than 25	5	3.4	3.4	3.4
	25-34	47	32.4	32.4	35.9
	35-44	74	51.0	51.0	86.9
	44-54	16	11.0	11.0	97.9
	more than 54	3	2.1	2.1	100.0
	Total	145	100.0	100.0	

		education			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	master/phd	3	2.1	2.1	2.1
	degree	27	18.6	18.8	20.8
	diploma	29	20.0	20.1	41.0
	technical cert	28	19.3	19.4	60.4
	secondary school	57	39.3	39.6	100.0
	Total	144	99.3	100.0	
Missing	System	1	.7		
Total		145	100.0		

		work_experience			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 5 years	11	7.6	7.6	7.6
	5-10 years	51	35.2	35.2	42.8
	11-15 years	58	40.0	40.0	82.8
	16-20 years	23	15.9	15.9	98.6
	more than 20 years	2	1.4	1.4	100.0
	Total	145	100.0	100.0	

		concern_env			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	yes	145	100.0	100.0	100.0

		env_care			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	yes	145	100.0	100.0	100.0



## APPENDIX C : Factor Analysis

### Factor Analysis (B)

#### KMO and Bartlett's Test

<b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</b>		<b>.785</b>
<b>Bartlett's Test of Sphericity</b>	<b>Approx. Chi-Square</b>	<b>904.792</b>
	<b>df</b>	<b>45</b>
	<b>Sig.</b>	<b>.000</b>

#### Component Matrix<sup>a</sup>

	Component
	1
B1	.621
B2	
B3	.730
B4	
B5	
B6	.701
B7	
B8	.655
B9	.781
B10	.776

Extraction Method: Principal Component Analysis.

### Factor Analysis(C,D,E,F)

#### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.814
Bartlett's Test of Sphericity	Approx. Chi-Square	1028.449
	df	171
	Sig.	.000

	Component			
	1	2	3	4
C1				.549
C2				.778
C3				.671
C4				.722
D1		.684		
D2		.682		
D3		.597		
D4		.766		
D5		.681		
E1				
E2		.510		
E3	.528			
E4	.564			
F1			.812	
F2			.758	
F3			.698	
F4	.838			
F5	.853			
F6	.516			

### Factor Analysis(G,H,I)

#### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.857
Bartlett's Test of Sphericity	Approx. Chi-Square	715.537
	df	55
	Sig.	.000

	Component		
	1	2	3
G1	.731		
G2	.754		
G3	.807		
G4	.641		
G5	.804		
H1		.700	
H2		.661	
H3		.752	
I1			.783
I2			.832
I3			.825

## APPENDIX D : Realibility Analysis

### RELIABILITY (B1 B3 B6 B8 B9 B10)

#### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.842	.839	6

### RELIABILITY (C1 C2 C3 C4)

#### Reliability Statistics

##### Cronbach's Alpha N of Items

.739	4
------	---

### RELIABILITY (D1 D2 D3 D4 D5 E2)

#### Reliability Statistics

##### Cronbach's Alpha N of Items

.777	6
------	---

### RELIABILITY (E3 E4 F4 F5 F6)

#### Reliability Statistics

##### Cronbach's Alpha N of Items

.749	5
------	---

### RELIABILITY (F1 F2 F3)

#### Reliability Statistics

##### Cronbach's Alpha N of Items

.801	3
------	---

### RELIABILITY (G1 G2 G3 G4 G5)



#### Reliability Statistics

Cronbach's Alpha N of Items

.867	5
------	---

#### RELIABILITY (H1 H2 H3)

#### Reliability Statistics

Cronbach's Alpha N of Items

.715	3
------	---

#### RELIABILITY (I1 I2 I3)

#### Reliability Statistics

Cronbach's Alpha N of Items

.795	3
------	---



## APPENDIX E : Correlation Analysis

### Correlations

		ocbe2	gjd	grs	gtd	gpm	gcm	ghs	glr
ocbe2	Pearson Correlation	1							
	Sig. (2-tailed)								
	N	145							
gjd	Pearson Correlation	.448**	1						
	Sig. (2-tailed)	.000							
	N	145	145						
grs	Pearson Correlation	.273**	.391**	1					
	Sig. (2-tailed)	.001	.000						
	N	145	145	145					
gtd	Pearson Correlation	.354**	.393**	.375**	1				
	Sig. (2-tailed)	.000	.000	.000					
	N	145	145	145	145				
gpm	Pearson Correlation	.293**	.383**	.288**	.436**	1			
	Sig. (2-tailed)	.000	.000	.000	.000				
	N	145	145	145	145	145			

gcm	Pearson Correlation	.292**	.375**	.343**	.550**	.377**	1		
	Sig. (2-tailed)	.000	.000	.000	.000	.000			
	N	145	145	145	145	145	145		
ghs	Pearson Correlation	.256**	.357**	.288**	.441**	.277**	.625**	1	
	Sig. (2-tailed)	.002	.000	.000	.000	.001	.000		
	N	145	145	145	145	145	145	145	
glr	Pearson Correlation	.216**	.261**	.179*	.325**	.062	.326**	.450**	1
	Sig. (2-tailed)	.009	.002	.031	.000	.460	.000	.000	
	N	145	145	145	145	145	145	145	145

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).